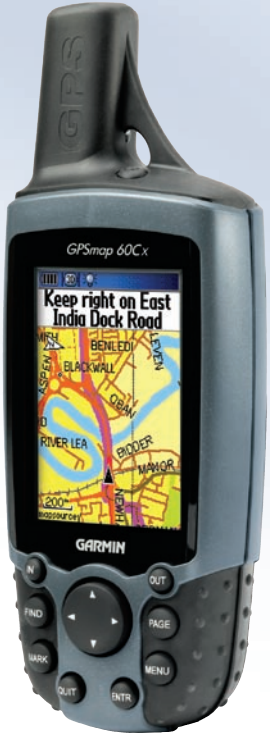
GPSMAP® 60Cx

color map navigator

owner's manual



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Introduction

Thank you for choosing the Garmin GPSMAP 60Cx. The GPSMAP 60Cx uses the proven performance of Garmin GPS and full-featured mapping to create an unsurpassed portable GPS receiver. Take a moment now to compare the contents of this package with the packing list on the box. If any pieces are missing, contact your Garmin dealer immediately.

About This Manual

To get the most out of your new navigation system, take time to read this manual and learn the operating procedures for your unit in detail. This manual is organized into the following sections.

The **Introduction** contains the Table of Contents.

The **Getting Started** section provides an overview of the unit, how to turn the unit on, and how to acquire satellites.

The **Basic Operation** section provides information about setting up waypoints, routes, and tracks.

The **Main Pages** section contains an overview of the Satellite, Trip Computer, Map, and Compass Pages.

The **Main Menu** section describes features found on the Main Menu, and information on how to change settings.

The **Appendix** contains information such as specifications, optional accessories, and maintenance information. You can also find warranty and FCC information in the Appendix.

An **Index** is provided at the end of the manual for reference.

Manual Conventions

This manual uses the term **Warning** to indicate a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

This manual uses the term **Caution** to indicate a potentially hazardous situation, which, if not avoided, may result in minor injury or property damage. It may also be used without the symbol to alert you to avoid unsafe practices.

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Software License Agreement

BY USING THE GPSMAP 60Cx, YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THE FOLLOWING SOFTWARE LICENSE AGREEMENT. PLEASE READ THIS AGREEMENT CAREFULLY.

Garmin grants you a limited license to use the software embedded in this device (the "Software") in binary executable form in the normal operation of the product. Title, ownership rights, and intellectual property rights in and to the Software remain in Garmin.

You acknowledge that the Software is the property of Garmin and is protected under the United States of America copyright laws and international copyright treaties. You further acknowledge that the structure, organization, and code of the Software are valuable trade secrets of Garmin and that the Software in source code form remains a valuable trade secret of Garmin. You agree not to decompile, disassemble, modify, reverse assemble, reverse engineer, or reduce to human readable form the Software or any part thereof or create any derivative works based on the Software. You agree not to export or re-export the Software to any country in violation of the export control laws of the United States of America.

Product Registration

Help us better support you by completing our online registration today! Have the serial number of your GPSMAP 60Cx handy and connect to our Web site (http://www.garmin.com). Look for the Product Registration link on our Home page.

Use this area to record the serial number in case your GPSMAP 60Cx is lost, stolen, or needs service. Be sure to keep your original sales receipt in a safe place or attach a photocopy inside the manual.

Serial Number: ___ ___ ___ ___ ___ ___ ___ ___

Contact Garmin

If you should encounter any difficulty while using your GPSMAP 60Cx, or if you have any questions, in the U.S.A. contact Garmin Product Support by phone: 913/397.8200 or 800/800.1020, Monday–Friday, 8 AM–5 PM Central Time; or by e-mail at sales@garmin.com.

In Europe, contact Garmin (Europe) Ltd. at 44/0870.8501241.

Caring for the GPSMAP 60Cx

The GPSMAP 60Cx case is constructed of high quality materials and does not require user maintenance except cleaning.

Cleaning the Case

Clean the unit's outer casing (except for the screen) using a cloth dampened with a mild detergent solution and then wipe dry. Avoid chemical cleaners and solvents that may damage plastic components.

Cleaning the Screen

The GPSMAP 60Cx screen should be cleaned using a soft, clean, lint-free cloth. Water, isopropyl alcohol, or eyeglass cleaner can be used if needed. If these are used, apply the liquid to the cloth and then gently wipe the screen with the moistened cloth.

Storage

Do not store the GPSMAP 60Cx where prolonged exposure to temperature extremes may occur (such as in the trunk of a car) as permanent damage may result. User information, such as waypoints and routes are retained in the unit's memory without the need for external power. It is always a good practice to back up important user data by manually recording it or downloading it to a PC (transferring it to MapSource).

Water Immersion

The GPSMAP 60Cx is waterproof to IEC Standard 60529 IPX7. It can withstand immersion in 1 meter of water for 30 minutes. Prolonged submersion can cause damage to the unit. After submersion, be certain to wipe and air dry the unit before reuse or charging.

Warning

Failure to avoid the following potentially hazardous situations could result in an accident or collision resulting in death or serious injury.

When navigating, carefully compare information displayed on the GPSMAP 60Cx to all available navigation sources, including information from visual sightings, and maps. For safety, always resolve any discrepancies or questions before continuing navigation.

Use the electronic chart in the GPSMAP 60Cx only to facilitate, not to replace, the use of authorized government charts. Official government charts and notices to mariners contain all information needed to navigate safely.

WARNING: This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This Notice is being provided in accordance with California's Proposition 65. If you have any questions or would like additional information, please refer to our Web site at http://www.garmin.com/prop65.

Caution

Failure to avoid the following potentially hazardous situations may result in injury or property damage.

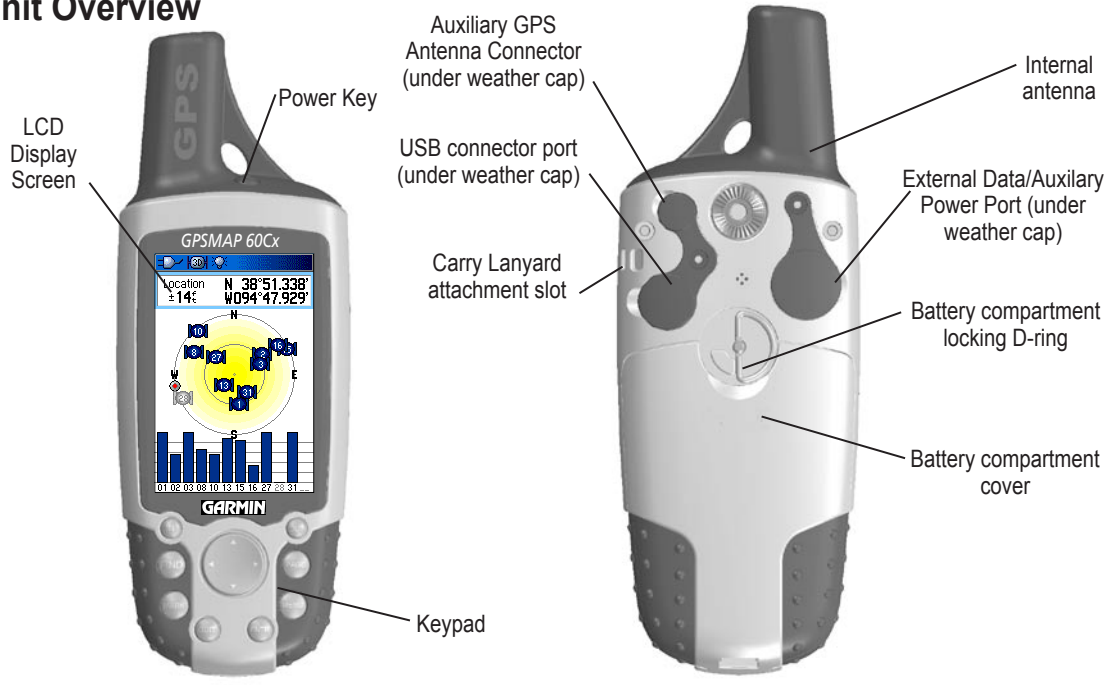
Use the GPSMAP 60Cx only as a navigational aid. Do not attempt to use the GPSMAP 60Cx for any purpose requiring precise measurement of direction, distance, location, or topography. This product should not be used to determine ground proximity for aircraft navigation.

The Global Positioning System (GPS) is operated by the United States government, which is solely responsible for its accuracy and maintenance. The government's system is subject to changes which could affect the accuracy and performance of all GPS equipment, including the GPSMAP 60Cx. Although the GPSMAP 60Cx is a precision navigation device, any navigation device can be misused or misinterpreted and, therefore, become unsafe.

Map Data Information: One of the goals of Garmin is to provide customers with the most complete and accurate cartography that is available to us at a reasonable cost. We use a combination of governmental and private data sources, which we identify in product literature and copyright messages displayed to the consumer. Virtually all data sources contain inaccurate or incomplete data to some extent. This is particularly true outside the United States, where complete and accurate digital data is either not available or prohibitively expensive.

GETTING STARTED

Unit Overview



Installing the Batteries

The GPSMAP 60Cx operates on two AA batteries (not included), which are located in the back of the unit. You can use Alkaline or NiMH batteries. See page 56 for information on setting the battery type.

To install the batteries:

1. Remove the battery cover by turning the D-Ring 1/4 turn counter-clockwise and pulling the cover loose.
2. Insert the batteries, observing the proper polarity. A polarity diagram is molded into the battery compartment.
3. Reinstall the battery cover by aligning the back cover with the unit and turning the D-Ring 1/4 turn clockwise.

Remove the batteries from your GPSMAP 60Cx when you do not expect to use the unit for several months. Stored data is not lost when batteries are removed.

To install the Lanyard:

1. Place the loop of the Lanyard through the slot at the at the upper left side on the back of the unit.
2 Route the strap through the loop and pull tight.

Refer to page 9 for information on accessing the MicroSD data card in the battery compartment.

Using the GPSMAP 60Cx Keypad

POWER Key

- Press and hold to turn the unit on or off.
- Press and Release to adjust the backlighting.

IN/OUT Zoom Keys

- Press to zoom in or out on the Map Page.
- Press to scroll up or down a list on any other page.

FIND/MOB Key

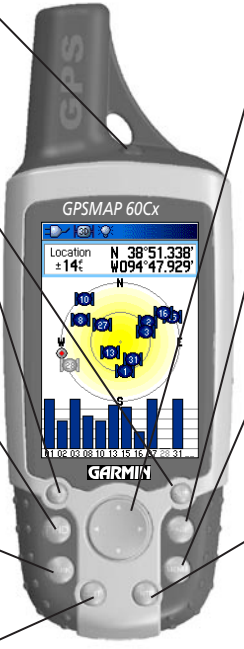
- Press and release at any time to view the Find Menu.
- Press and hold for MOB*

MARK Key

- Press and release at any time to mark your current location.

QUIT Key

- Press and release to cancel data entry or exit a page.



ROCKER Key

- Press up, down, left, or right to highlight options and to enter data, or move the map panning arrow.

PAGE Key

- Press and release to cycle through the main pages.

MENU Key

- Press and release to view page options.
- Press twice to view the Main Menu.

ENTER Key

- Press and release to enter highlighted options, data or confirm on-screen messages.

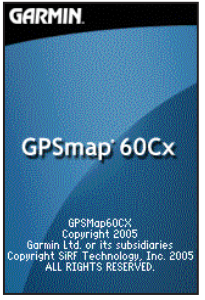
* Man Overboard (MOB) feature stores a waypoint and then navigates back to it.

Turning on the GPSMAP 60Cx

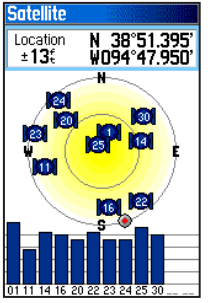
When the GPSMAP 60Cx is turned on, the Introduction Page appears, followed by the Satellite Page. The unit must collect satellite data and establish its current location.

To turn the GPSMAP 60Cx on and off:

1. Press and hold the **POWER** key. When the unit turns on, a tone sounds and the Introduction Page appears, followed by the Satellite Page.
2. To turn off the GPSMAP 60Cx, press and hold the **POWER** key again.



Welcome Page



Satellite Page

Adjusting the Backlight

You may want to adjust the backlight to see the display better.

To adjust the backlight level:

1. Press and quickly release the **POWER** key.
2. Press up on the **ROCKER** to increase the brightness, or press down to decrease.
3. Press **ENTER** or **QUIT** to close the Backlight adjustment window.

Backlight Adjustment Slider

See page 57 for information on changing the display colors and backlight timeout and brightness levels.

Initializing the GPS Receiver

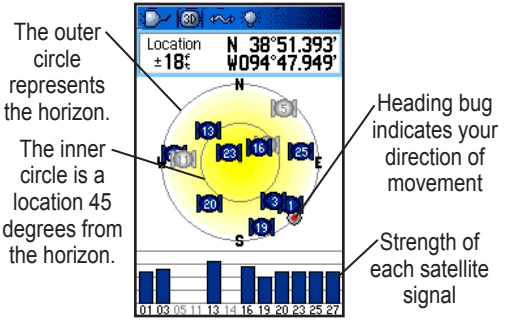
The first time you turn on your GPSMAP 60Cx, the GPS receiver must collect satellite data and establish its current location. To ensure proper initialization, the GPSMAP 60Cx is shipped from the factory in AutoLocate mode, which allows the receiver to "find itself" anywhere on Earth. To receive satellite signals, you must be outdoors and have a clear view of the sky.

To initialize your GPSMAP 60Cx:

1. Press and hold the **POWER** key to turn on the GPSMAP 60Cx.
2. Hold the unit in front of you with the top tilted upward. While the GPS receiver is searching for the satellite signals, a "Locating Satellites" message is replaced by an "Acquiring Satellites" message until enough signals are acquired to fix its location.

   When the receiver has signals from at least three satellites, the display at the top of the page changes to indicate position accuracy and location coordinates.
3. Press and release the **PAGE** key until the Map Page appears. You are now ready to begin GPS aided navigation.

You can also observe a sky view array of the satellites overhead with your location centered in the array. The outer circle represents the horizon and the inner circle a position 45 degrees from the horizon. The numbers shown indicate the number assigned to each satellite. A bar graph at the bottom of the page shows the strength of signals from each satellite.



If the unit cannot get a satellite fix, a list of solutions appears. Select an appropriate solution and press **ENTER** to continue.

Using the GPSMAP 60Cx

This section explains how to enter and select information with the GPSMAP 60Cx.

Understanding Terms

As you progress through this owner's manual, you are directed to press a specific key or highlight a field on the screen. When you are directed to press a key, you should press and quickly release the key. If the key needs to be held down for a period of time to start a secondary function, the instructions will tell you to do so. When a field is highlighted on the screen, it is highlighted in yellow. The position of the highlight is controlled by the **ROCKER**.

The following terms are used throughout this manual:

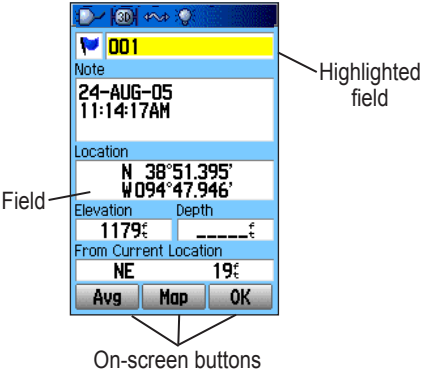
Highlight—move the highlighted area on the screen up, down, left, or right with the **ROCKER** to select individual fields.

Field—the location on a page where data or an option can be shown and entered. Select (highlight) a field using the **ROCKER** to begin entering data or selecting options.

On-screen button—use the **ROCKER** to highlight a button, and press **ENTER** to select the button.

Scroll bar—when viewing a list of items too long to appear on the screen, a scroll bar appears along the right side of the list. To scroll through a list, press up or down on the **ROCKER** or use **Zoom In** to scroll a set of items and **Zoom Out** to scroll the entire screen.

Default—the factory setting saved in the unit's memory. You can change the settings, but you can also revert to the factory (default) settings when you select **Restore Defaults** when offered as an option.



Selecting Options and Entering Data

To enter data and select options, use the **ROCKER** to highlight, select, or choose an item in a list or a field on the screen.

To select and activate an option:

1. From any page, press **MENU**. An Options Menu appears with a list of additional options for that page.
2. Use the **ROCKER** to move the highlight up, down, right, or left on the menu to highlight the option you want, and press **ENTER** to select it.

To exit a menu or return to the previous setting:

Press **QUIT**. The **QUIT** key moves backward through your steps. Press **QUIT** repeatedly to return to the starting page.

Using the Status Bar

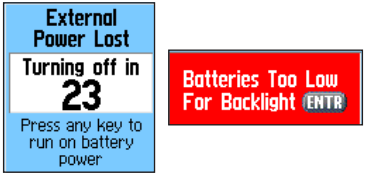
At the top of each page, the status bar provides status information for several unit features.

Status Bar

- Power to the unit is provided by either batteries or from an auxiliary source (AC, DC or USB Adapter). The Battery Power icon ( ) shows the remaining power as the battery is depleted.
- The Auxiliary Power icon ( ) appears when the unit is powered by an external source such as the USB Data Cable provided with your unit or optional Serial Data/Power Cable or Cigarette Lighter Adapter.
- Satellite signal status is shown when searching for or acquiring satellites ( ), when a 2D fix ( ) is attained and when a 3D fix ( ) is attained (four or more satellites are received.)
- The Backlight icon ( ) appears when the backlight is on. Backlighting is off when you turn the unit on. The Backlight uses a significant amount of battery power.
- The USB Cable Connection icon ( ) appears when the unit is in communication with a PC Universal Serial Bus.

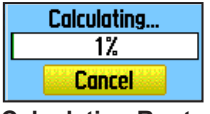
On-Screen Messages

When a significant event in the operation of the unit occurs, an on-screen message appears to advise you of the occurrence. In each case the condition is described and often a remedy provided. Press **ENTER** to acknowledge the message and close the window.



On-Screen Messages

In some instances the message may indicate a temporary condition such as the "Calculating Route" message and close as soon as calculation is completed.



Calculating Route Message

Using the Mapping Databases

Many of the GPSMAP 60Cx features require detailed mapping data in order to be fully operational, so you may want to transfer maps before using the unit. The MicroSD card provided with your unit can be loaded with detailed maps from optional MapSource disks for your PC can enhance the versatility of your GPSMAP 60Cx. With selected MapSource detailed mapping data, you can view listings of nearby restaurants, lodging, shopping centers, attractions and entertainment, and even retrieve addresses and phone numbers for any listed location. The amount of data transferable is limited to the capacity printed on the MicroSD card.

Map data transfer requires the USB Interface Cable provided with the unit to transfer MapSource data from a PC to the MicroSD card in the GPSMAP 60Cx. Inserting the MicroSD card in a standard SD card adapter and card reader allows for faster transfer.

You can purchase additional higher capacity MicroSD cards at your electronics supplier. See the Garmin Web site (http://www.garmin.com/cartography/) for compatible MapSource products.

Transferring Data to a MicroSD Card

The GPSMAP 60Cx is equipped with a pre-installed MicroSD card.

To install or remove the MicroSD card:

1. Remove the Battery Compartment Cover from the back of the unit and remove the two batteries.
2. Locate the card tray at the center of the battery tray and check to be certain the card is installed in the tray.
3. If you desire to remove the card, slide the tray cover up, then lift it toward you to remove the card from the tray.
4. To re-insert the card, lay the card in the tray, close the tray, and replace the batteries and cover when finished.

To transfer map data to the MicroSD card:

1. Lift the weather cover from the USB port on the upper back of the unit. It recommended that you use the USB port rather than the Serial Connection port for faster data transfer.
2. Connect the USB cable provided with the unit to the USB port on your PC and to the mini-USB port on the back of the unit.
3. Follow instructions for selecting and downloading maps provided with the MapSource map data disk.

USB Port under weather cover
MicroSD card tray is located beneath the batteries in the battery compartment.
Slide the tray cover back to OPEN, then lift to remove or insert the MicroSD card. Close and slide forward to LOCK.
Unlock
Lock
SanDisk
LOCK

Detail of MicroSD card tray in Battery Compartment

Back of GPSMAP 60Cx with Battery Cover removed

Basic Operation

This section explains some of the more common operations you will perform with your GPSMAP 60Cx including creating and using waypoints, using the Find Menu, and how to create and use tracks and routes.

Creating and Using Waypoints

Waypoints are locations or landmarks you record and store in your GPS. They are locations you might want to return to later. You can add waypoints to routes and even create a Go To directly to the selected waypoint.

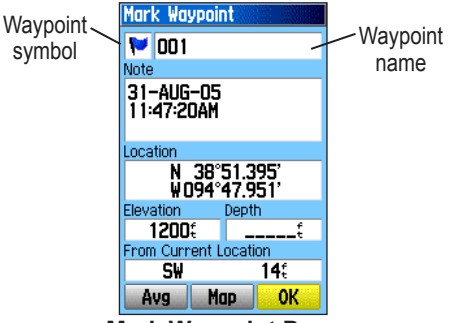
Waypoints can be created using three methods. You can press the **MARK** key while at a location, create a waypoint on the Map Page, or enter coordinates for a waypoint manually.

Marking Your Current Location

Use the **MARK** key to quickly capture your current location to create a new waypoint. You must have a valid position (2D or 3D) fix to mark your current location.

To mark your current location:

1. Press and hold the **MARK** key until the Mark Waypoint Page appears. A default three-digit name and symbol are assigned to the new waypoint.



Mark Waypoint Page

2. To accept the waypoint with the default information, highlight **OK**, and press **ENTER**.
   Or
   To change any information on the Mark Waypoint Page, highlight the appropriate field, and press **ENTER** to open the on-screen keypad. After entering and confirming your changes, highlight **OK**, and press **ENTER**.

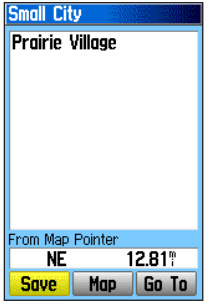
Creating Waypoints Using the Map

You can quickly create a waypoint using the Map Page. When you pan the map and move the arrow over a map item, you will see a highlighted description of the item.

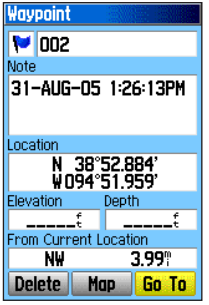
To create a waypoint using the Map Page:

1. On the Map Page, use the **ROCKER** to move the pointer to the map item you want to mark as a waypoint.
2. Press and quickly release **ENTER** to capture the pointer location and open the information page for the map item.
3. Highlight **Save**, and press **ENTER**.

   If the map item selected contains no information, a "No map information at this point. Do you want to create a user waypoint here?" message appears. Highlight **Yes**, and press **ENTER**.
4. To change any information on the Waypoint Page, highlight the appropriate field, and press **ENTER** to open the on-screen keypad. After entering and confirming your changes, highlight **OK**, and press **ENTER**.



Information page for a map point with data



Information page for a map point without data

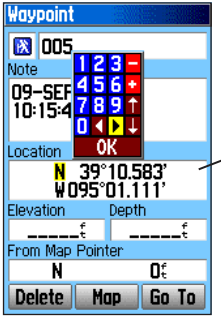
Creating a Waypoint Using Coordinates

You can manually enter location coordinates to create a waypoint. This method is useful for creating a waypoint at a specific latitude/longitude position from a chart.

To create a new waypoint by entering location coordinates:

1. Create a new waypoint.
2. On the Waypoint Page, highlight the **Location** field, and press **ENTER** to open the on-screen keypad.

3. Use the **ROCKER** to enter location coordinates. Highlight **OK**, and press **ENTER** when finished.



4. Press **QUIT** to exit.

Editing Waypoints

You can edit waypoints when created or at a later date. You can change the symbol, name, note, location, elevation, and depth.

To edit a waypoint:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Waypoints** icon, and press **ENTER** to open the Waypoints Page.
3. Select the waypoint you want to edit, and press **ENTER**. The Waypoint Page opens.
4. Make changes by highlighting each field and use the waypoint symbol chart, and alphanumeric keypad to enter new data.
5. Press **QUIT** when finished.

Deleting Waypoints

You can delete waypoints from the Waypoint Page.

NOTE: *When you delete a waypoint, you cannot recover it from the unit.*

To delete a waypoint:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Waypoints** icon, and press **ENTER** to open the Waypoints Page.
3. Select the waypoint you want to delete, and press **ENTER**. The Waypoint Page opens.
4. Highlight the **Delete** button, and press **ENTER**. A confirmation message appears.
5. Highlight **Yes**, and press **ENTER** to delete the waypoint.

To move a waypoint on the Map Page:

1. On the Find Menu, Highlight the **Waypoints** icon, and press **ENTER** to open the Waypoints Page.
2. Select the waypoint you want to move, and press **ENTER**. The Waypoint Page opens.
3. Highlight the **Map** button, and press **ENTER** to show the waypoint on the map.
4. Press **ENTER** again to place a **MOVE** marker next to the waypoint.
5. Use the **ROCKER** to move the waypoint to a new location on the map, and press **ENTER**.

Moving a waypoint

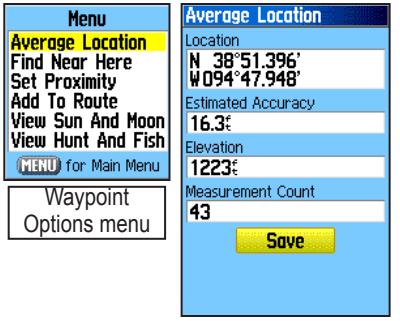
Averaging the Waypoint's Location

You can average a new waypoint location over time to produce a more accurate location.

NOTE: *You must have a GPS Satellite fix before you can average a waypoint's location. You cannot average a waypoint after it has been saved to the waypoints list and Mark Waypoint page closed.*

To calculate the average location:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Waypoints** icon, and press **ENTER** to open the Waypoints Page.
3. Select the waypoint for which you want to calculate the average location, and press **ENTER**.
4. Press **MENU** to open Options Menu
5. Highlight **Average Location**, and press **ENTER** to open the Average Location Page. The unit begins calculating the average location of the waypoint.



Waypoint Options menu

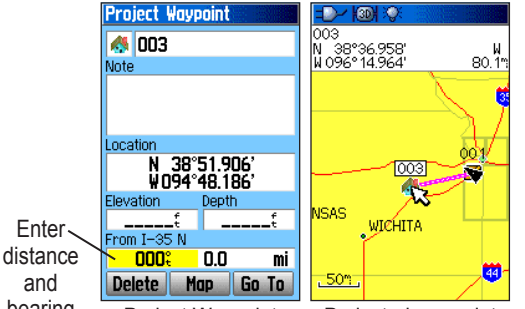
6. Press **ENTER** to save the location.

Projecting a Waypoint

You can create a new waypoint by projecting the distance and bearing from a specific location to a new location.

To project a waypoint:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Waypoints** icon, and press **ENTER** to open the Waypoints Page.
3. Select the waypoint you want to project, and press **ENTER**. The Waypoint Page opens.
4. Press **MENU** to open the Options menu.
5. Select **Project Waypoint**, and press **ENTER** to open the Project Waypoint Page.
6. Enter the distance and bearing to the projected waypoint in the appropriate fields at the bottom of the page, and press **QUIT** when finished.

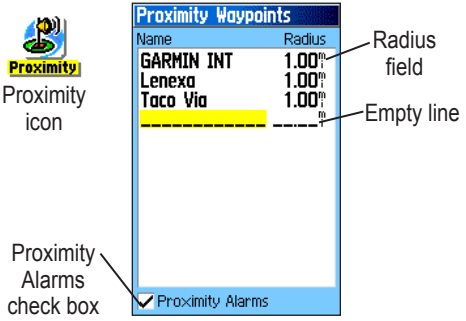


Project Waypoint Page

Projected waypoint on the map

Proximity Waypoints

Use the Proximity Waypoints Page to define an alarm circle around a stored waypoint location.



To add a proximity waypoint

1. Press **MENU** twice to open the Main Menu.
2. Highlight the **Proximity** icon, and press **ENTER** to open the Proximity Waypoints Page.
3. Highlight an empty line, and press **ENTER** to open the Find Menu.
4. Select a waypoint from the Waypoints List or from any other group of map points, and press **ENTER** to open the information page for the item.
5. With the **Use** button highlighted, press **ENTER** to add the point to the list on the Proximity Waypoints Page.
6. Use the **ROCKER** to highlight the **Radius** field if you want to enter a value different than the default of 1 mile.

To turn proximity alarms on or off:

1. Press **MENU** twice to open the Main Menu.
2. Highlight the **Proximity** icon and press **ENTER** to open the Proximity Waypoints Page.
3. Highlight the **Proximity Alarms** check box, and press **ENTER** to initiate the alarm feature. When you trigger an alarm, a tone will sound and a “Near Proximity Point” message appears. When you move outside the set radius, a “Leaving Proximity Point” message is shown.

To clear one or all proximity waypoints from the list:

To remove or review a single entry, press **ENTER**.

Or

To remove all waypoints from the list, press **MENU**, highlight **Remove All**, and press **ENTER**.

Man OverBoard (MOB)

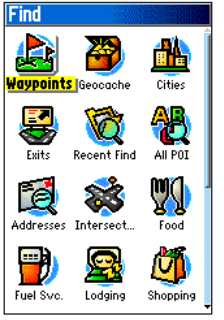
Another method for creating a waypoint is the Man Overboard (MOB) feature. Typically an application for marking a location on water where you cannot stop quickly and must return to a point where there are no landmarks for reference.

To create a waypoint using the MOB feature:

1. Press and hold the **FIND** key.
2. Press **ENTER** to open the Map Page showing the path from your current location to the MOB point. Use the Compass Page for additional guidance to the MOB point.

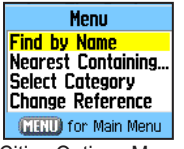
Using the Find Menu

Use the Find Menu to search for waypoints, cities, and exits included in the GPSMAP 60Cx basemap. You can also find saved waypoint and geocache points. Additional icons appear depending on the optional BlueChart or MapSource data loaded to the unit. Press **FIND** to open the Find Menu.



Find Menu with optional MapSource data

Waypoint Options Menu



Cities Options Menu

When you access a Find group list, it contains only those items near your current location or the pointer (if active).

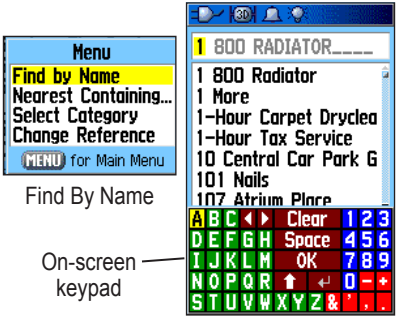
The options menu for each category contains a submenu of search options such as Find By Name, Find Nearest, Select Symbol (for waypoints), Change Reference (by moving the pointer to a new location), Nearest Containing (a keyword you enter), Select Category (for those groups such as **Food & Drink**, and **Lodging**). Use these options to shorten your search.

Find By Name

If you know the name of the location you want to find, use the Find By Name option.

To find a location using Find By Name:

1. Press **FIND** to open the Find Menu.
2. Use the **ROCKER** to highlight the icon for the type of item for which you want to search, and press **ENTER**.
   Or
   To search the entire database, select the **All Points of Interest** icon, and press **ENTER**.
3. Press **MENU**, highlight **Find By Name**, and press **ENTER**.
4. Use the **ROCKER** and **ENTER** key to operate the on-screen keypad and enter the name of the location you want to find. When the Find list contains a match, highlight **OK** and press **ENTER**.



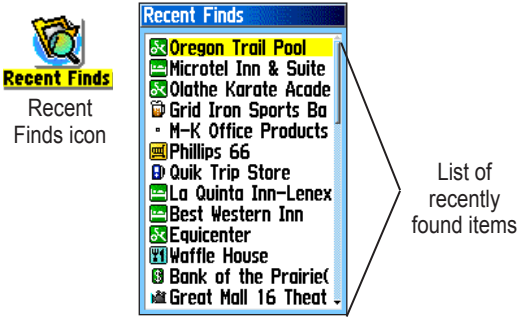
5. Highlight the location in the Find list, and press **ENTER**. The item's information page opens, allowing you to save the item as a waypoint, show the item on the map, or automatically create a route (Go To) the item.

Recent Finds

The Recent Finds Page shows a list of the last 50 items you have searched for or gone to recently.

To go to a recently found item:

1. Press **FIND** to open the Find Menu, then press **FIND** again to display the list of recent finds.
2. Highlight the **Recent Finds** icon, and press **ENTER** to open the Recent Finds Page.



3. Use the **ROCKER** to select the item you want to go to, and press **ENTER** to open the item's information page.
4. Highlight **Go To**, and press **ENTER** to begin navigation.

Using the Find Item Information Page

When you select an item from the Find item list and press **ENTER**, an information page shows detailed information about the item. Each information page contains three on-screen buttons. Different buttons appear depending on whether you are selecting a Find item to navigate to or adding a Find item to a route list.

Find Information Page Options Menu

The Options Menu for each information page contains options for using a Find item as a tool for navigation.

To use the Options Menu:

1. With an information page open for a Find item, press **MENU** to open the Options Menu.
2. Use the **ROCKER** to select an option, and press **ENTER**:

Average Location—samples a waypoint location over time and average the result for a more accurate location reference. See page 13 for more information.

Project Waypoint—create a new waypoint by referencing another location by entering bearing and

distance from the referenced location. See page 14 for more information.

Find Near Here—returns you to the Find Menu where you can search for map items near the item defined on the information page.

Change Reference—point to a new location on the Map Page using the pointer to search from that point.

Set Proximity—program an alarm to sound when you are within a specified radius of an item defined by the information page. See page 15 for more information.

Add To Route—include this item on a new route or add it to an existing route. See "Using Routes" on page 31 for more information.

View Sun and Moon—view Sun and Moon tables for this item location. See page 68 for more information.

View Hunt and Fish—view Hunt and Fish tables for this item location. See page 69 for more information.

Map Information—show the map from which the map item originated. See the Appendix for information about downloading detailed maps.

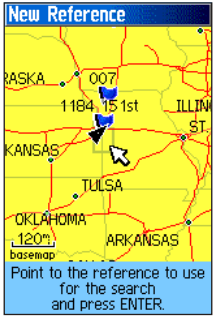
To find an item near another item:

1. Press **FIND** to open the Find Menu.
2. Select an icon on the Find Menu, and press **ENTER**.
3. Highlight an item in the Find list, and press **ENTER** to open the information page.
4. Press **MENU** to open the Options Menu, Highlight **Find Near Here**, and press **ENTER**. The Find Menu opens again with each category containing items near the item selected on the information page.
5. Select a category icon and press **ENTER** to open a Find list of items near the item.

To find an item from another location on the map:

1. Press **FIND** to open the Find Menu.
2. Select an icon on the Find Menu, and press **ENTER**.
3. Press **MENU** to open the Options Menu, Highlight **Change Reference**, and press **ENTER**.The Map Page appears.

4. Use the **ROCKER** to pan the arrow (pointer) to the map location you want, and press **ENTER**. The Find list shows a list of items near the new map location.



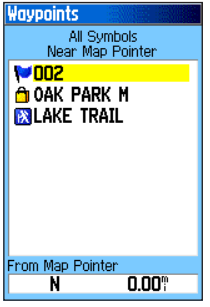
Finding a Waypoint

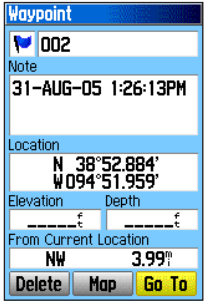
The Waypoints Page contains a list of all saved waypoints. Waypoints are stored in alphanumeric order and are also identified by a symbol assigned from a list of symbol types.

To find a waypoint:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Waypoints** icon, and press **ENTER** to open the Waypoints Page.
3. Use the **ROCKER** to select a waypoint, and press **ENTER**. The Waypoint Page opens.

Waypoints icon





Finding a Geocache

Use the **Geocache** icon to view the list of geocache locations created using your GPSMAP 60Cx or downloaded from your computer. A geocache location is a waypoint with a special geocache symbol assigned to give special significance and to allow it to be separated from others on the waypoints list.

For more information on creating a geocache point, see Geocache Setup instructions on page 61 and www.garm.com/products/gpsmap60cx/.

To find a geocache:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Geocache** icon, and press **ENTER** to open the Geocache Page. You can view either found geocaches or those that have not been found.
3. Use the **ROCKER** to highlight a geocache on the list, and press **ENTER** to open the information page.
4. Highlight the **Go To** button and press **ENTER** to navigate to the geocache location. When you navigate to a geocache, the Compass Page changes to Geocache Navigation mode and any additional information about downloaded cache location is shown in the comment field.

When a geocache is found, the unit will mark the cache as found, log an entry into the calendar, and provide an option that, when activated, will show the nearest cache.

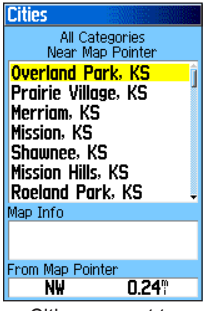
Finding a City

Use the **Cities** icon on the Find Menu to find any city listed in the mapping database (either in the basemap or from downloaded detailed mapping data).

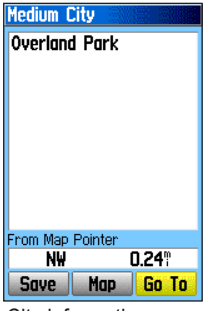
To find a city:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Cities** icon, and press **ENTER** The Cities Page shows a list of cities near your current location.

Cities icon



Cities nearest to your location.



City information page

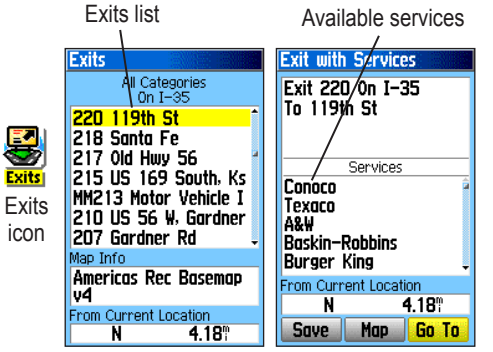
3. Select a city from the list and press **ENTER** to open the information page for the selected city.
   Or
   If the city you want is not listed, press **MENU**, select a search method, and press **ENTER**.

Finding an Interstate Exit

Use the **Exits** icon on the Find Menu to find an interstate exit.

To find an interstate exit:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Exits** icon, and press **ENTER**. The Exits Page shows a list of interstate exits near your location.
3. Use the **ROCKER** to select an exit, and press **ENTER** to open the information page. This page contains the exit description, a list of available services near the exit, and the distance and bearing from the exit to the highlighted service.



4. Select a service from the list, and press **ENTER** to open the information page for the selected service.
5. Select **Save**, **Map**, or **Go To** from the bottom of the page.

At the bottom of these Information Pages are on-screen buttons for **Go To**, **Map**, and **Save**.

Finding an Address

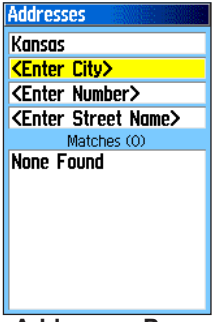
If you downloaded detailed mapping data, use the **Addresses** icon on the Find Menu to find an address. When you enter the street number, street name, and city, the find feature matches that data with addresses in the map database.

To find an address:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Addresses** icon, and press **ENTER** to open the Addresses Page.

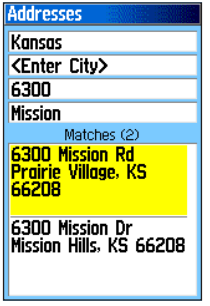
   If your unit has a GPS fix, the <**Enter Region**> field is populated with your current region. You do not have to specify a city in the **<Enter City>**, as the database has information for the entire region. However, you can select a city if you want to reduce the possible number of address matches.

Addresses icon

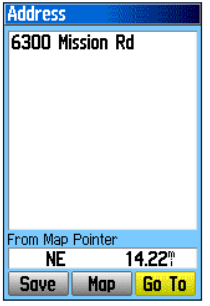


Addresses Page

3. Highlight the <**Enter Number**> field, and press **ENTER**.
4. Type the street number using the on-screen keypad. When finished, highlight **OK** and press **ENTER** again.
5. Highlight the **<Enter Street Name>** field, and press **ENTER**. The street list opens.
6. Use the on-screen keypad to enter enough of the street name to show a match. When finished, highlight **OK**, and press **ENTER**. A list of matches appears.
7. Select the address you want, and press **ENTER** to open the Address information page.



Matching addresses



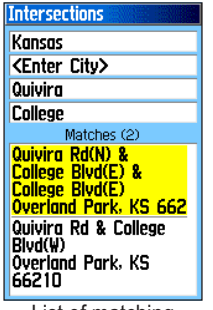
Information page

Finding an Intersection

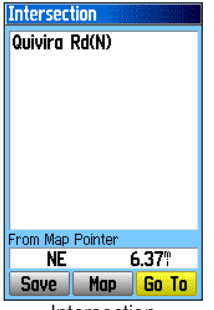
If you downloaded detailed mapping data, use the **Intersections** icon on the Find Menu to search for an intersection. When you enter the two street names and a city, and the find feature matches that data with intersections in the map database.

To find an intersection:

1. Press **FIND** to open the Find Menu.
2. Highlight the **Intersections** icon, and press **ENTER** to open the Intersections Page.
3. If your unit has a GPS fix, the <**Enter Region**> field is populated with your current region. You do not have to specify a city in the **<Enter City>**, as the database has information for the entire region. However, you can select a city if you want to reduce the possible number of intersection matches.
4. Highlight the **<Enter Street 1>** field, and press **ENTER**.
5. Type the street name using the on-screen keypad. When finished, highlight **OK** and press **ENTER** again.
6. Repeat steps 4 and 5 to enter a street name in the **<Enter Street 2>** field. When finished, a list of matches appears below.
7. Select an intersection, and press **ENTER** to open the information page.



List of matching intersections



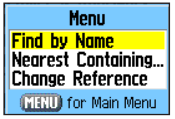
Intersection information page

Searching for a Point of Interest

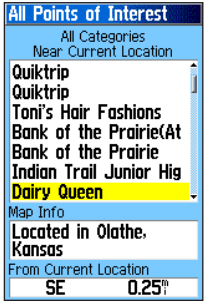
If you downloaded MapSource detailed mapping, you can use the **All Points of Interest** icon on the Find Menu to locate a nearby restaurant, lodging, landmark, public building, and so on.

To find a point of interest:

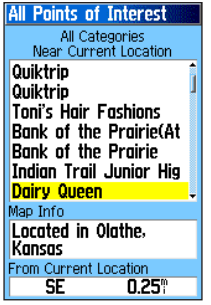
1. Press **FIND** to open the Find Menu.
2. Highlight the **All Points of Interest** icon, and press **ENTER** to show a list of all points near your current location.
3. Highlight an item in the list, and press **ENTER** to open the information page for the item.
   Or
   Press **MENU** to open the Options Menu where you can select options to help you narrow your search.

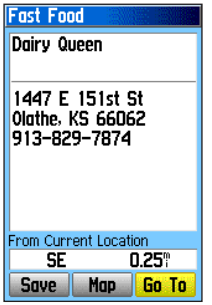


Narrow search criteria using the Options Menu



4. Highlight the item you want from the list, and press **ENTER** to open the information page for the selected item.





If you are searching for a restaurant that is part of a national chain, only the restaurant nearest to your location is shown when you search using the Find Nearest option. If you search using the By Name option, all of the locations for that chain in the mapping database are shown with the closest to your current location listed first.

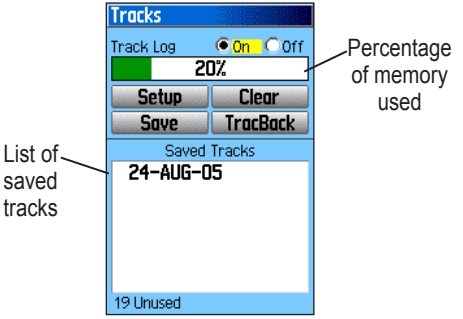
Custom Points of Interest

You can create your own category for points of interest by using the Garmin POI Loader utility available from the Garmin web site: *www.garmin.com/products/poiloader/*. Follow instructions for use on the web site.

Using Tracks

The Tracks feature creates an electronic breadcrumb trail or "track log" on the Map Page as you travel. The track log contains information about points along its path, including time, location, elevation, and depth for each point (depth requires NMEA input, see pages 58 and 75).

The track log starts recording as soon as the unit gets a location fix. The percentage of memory used by the current track log appears at the top of the Tracks Page. After you clear the track log, it shows 0%.



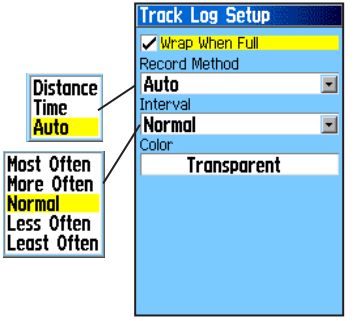
Tracks Page

To clear the track log:

1. Press **MENU** twice to open the Main Menu.
2. Select the **Tracks** icon, and press **ENTER**. to open the Tracks Page
3. Highlight the **Clear** button, and press **ENTER**. A confirmation message appears.
4. Highlight **OK**, and press **ENTER**.

To set up a track log:

1. Press **MENU** twice to open the Main Menu.
2. Select the **Tracks** icon, and press **ENTER** to open the Tracks Page.
3. Highlight the **Setup** button, and press **ENTER** to open the Track Log Setup Page.



Wrap When Full—when selected, the track log records over the oldest data with new data.

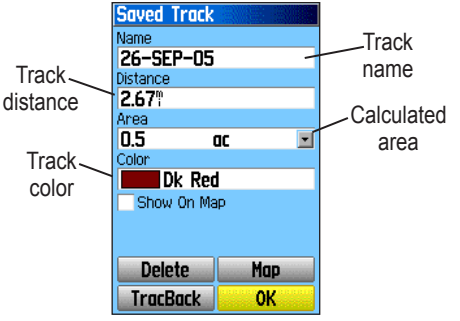
Record Method—Distance records track points after a specified distance is traveled. **Time** creates track points after a specified time has elapsed. **Auto** allows you choose from five intervals.

Interval—records a track according to the Record Method and Interval. Enter a specific distance, time, or frequency.

Color—select the color of the active track on the map.

To save the entire track log:

1. Press **MENU** twice to open the Main Menu.
2. Select the **Tracks** icon, and press **ENTER** to open the Tracks Page.
3. Highlight the **Save** button and press **ENTER**. A message appears asking you if you want to save the entire track.
4. Select **Yes**, and press **ENTER** to save the track. A "Saving Track" message appears followed by the Saved Track Page.



Saved Track Page

Use the Saved Track page to rename the track, view the track distance and calculated area, and specify a color for the track on the Map Page

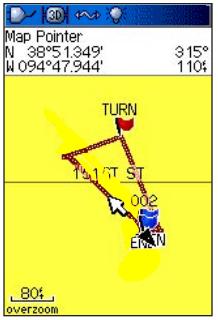
To save a portion of the track log:

1. Press **MENU** twice to open the Main Menu.
2. Select the **Tracks** icon, and press **ENTER** to open the Tracks Page.
3. Highlight the **Save** button and press **ENTER**, a message appears asking you if you want to save the entire track.

4. Select **No**, and press **ENTER** to save only a portion of the track log. A map showing the entire track appears
5. Use the **ROCKER** to move the pointer to the point on the track line that you want to be the beginning point, and press **ENTER**.
6. Use the **ROCKER** to move the arrow to the point on the track line that you want to be the ending point, and press **ENTER**. A "Saving Track" message appears followed by the Saved Track Page.
7. With **OK** highlighted, press **ENTER**.

To view a track on the map:

On the Saved Track Page, select the **Map** button, and press **ENTER** to open the Map Page. A map showing the entire track appears. Begin and End markers and user waypoints are added to the track.



Saved track on the Map Page

Use the Area Calculation option on the Options Menu to calculate the area of a track.

To calculate the area of a track:

1. With the Track Log Page open and the Track Log on, press **MENU** to open the Options Menu.
2. Highlight **Area Calculation**, and press **ENTER** to open the Area Calculation Page.
3. Press **ENTER** to start the area calculation. As you begin to move and define the area's boundaries, a **Stop** button appears at the bottom of the page.

4. When finished defining the area, press **ENTER** to open the page with a **Save** button.

Start calculation

Save calculated track

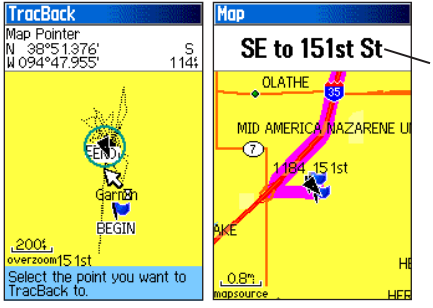
5. Press **ENTER** to save the new track to the Saved Tracks list on the Tracks Page.

Navigating a Saved Track

You can save your track log to use later as a TracBack. When initiated, a TracBack route takes you back to the oldest stored track log point.

To Use the TracBack feature:

1. With the Saved Tracks Page for the track or the Track Log open, highlight the **TracBack** button, and press **ENTER** to open the TracBack Page. A map showing the entire track appears and you are prompted to select the point you want to TracBack to.
2. Use **ROCKER** to move the pointer to the point on the map, and press **ENTER** to start navigating the TracBack.



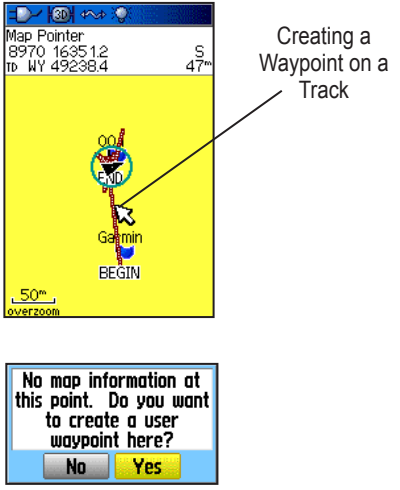
Directions to the first turn

3. Select either **Follow Road** to route back to the selected point using available roadways, or select **Follow Track** to retrace your original path of travel. Highlight the **Don't Ask Again** option, and press **ENTER** if you want to use the same option each time you use TracBack.

   The Map Page opens, with directions to the first turn on the track at the top of the page.
4. Move in the direction of the first turn. When you reach the first turn, directions to the next turn are shown, and so on, until you reach your destination.
5. To exit, press **MENU**, and select **Stop Navigation**.

To create a user waypoint on a saved track:

1. With a saved track shown on the map, use the **ROCKER** to move the pointer to the place on the track that you want to mark as a user waypoint. If the pointer is placed on the map where no map item is located, a prompt asks if you want to create a waypoint.
2. Press and hold the **ENTER** key to open the Mark Waypoint Page.
3. Customize the user waypoint, highlight **OK**, and press **ENTER** to save it.



Creating and Using Routes

Route navigation allows you to create a sequence of intermediate waypoints that lead you to your final destination. The GPSMAP 60Cx lets you store 50 routes with up to 250 points each.

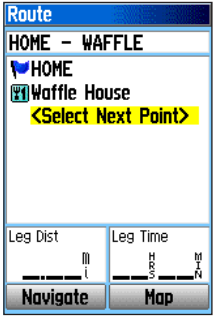
Creating a Route

You can create or modify a route using the Routes Page, and you can add waypoints to a route from the Find Menu. You can create more complex routes using a PC and MapSource mapping programs and then transfer them to the unit memory. Auto-Routes, which are generated when you select Go To for a Find item, map item, or waypoint, cannot be saved. Saved routes with more than 50 waypoints cannot be navigated using the Follow Roads option.

To create a route:

1. Press **MENU** twice to open the Main Menu.
2. Highlight the **Routes** icon, and press **ENTER** to open the Routes Page.
3. Use **ROCKER** to highlight the **New** button, and press **ENTER** to open the Route Page.
4. With the **<Select Next Point>** field highlighted, press **ENTER** to open the Find Menu.

Routes icon



Setting up a route

5. Use the Find Menu to select a route waypoint from one of the Find Menu groups and open the information page for the selected waypoint, city, exit, point of interest, and so on.
6. Highlight the **Use** button, and press **ENTER** to add it to the route.
7. To add more points to the route, repeat steps 4 to 6. You can rename the route if you want.
8. Highlight the **Navigate** button, and press **ENTER** to begin navigating.

Methods of navigating to a destination

- If you select the **Go To** button on the Waypoint Page or other Find Menu items, the GPSMAP 60Cx creates a straight path (point to point) from your current location to that location.
- If you select the **Navigate** button on a Route Page, the GPSMAP 60Cx creates a route composed of several user waypoints or Find Menu items, with the last being your destination. It navigates directly from point to point. Before each turn in the route a turn page shows a guidance message and graphic of the turn. You can view the turns at any time by pressing up or down on the **ROCKER** while the route is active.
- Both navigation methods change when you select the Follow Roads option on the Routing Setup Page. Both Go To navigation and point to point routing become routes that allow you to navigate using roads.

  The routes use existing roadways (either those in the basemap or from downloaded detailed mapping) to automatically calculate a route to your destination. Turns on roadways are added to the Active Route Page and are preceded by a guidance message with graphic of the turn. If there are not enough roads at your location to calculate a route, a message appears.

Navigating a Route

After you create a route, you can begin navigation immediately or save it to the Saved Routes list.

To navigate a saved route:

1. Press **MENU** twice to open the Main Menu.
2. Highlight the **Routes** icon, and press **ENTER** to open the Routes Page.
3. Highlight a saved route, and press **ENTER** to open the Route Page.
4. Highlight the **Navigate** button, and press **ENTER**.
5. To stop navigating, press **MENU**, select **Stop Navigation**, and press **ENTER**.

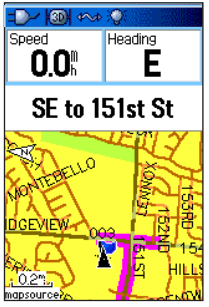
When navigating a route, a guidance message and graphic view of turns in the route appear as you approach each one. Using the Follow Roads option on

the Routing Setup Page increases the number of turns and shows an Active Route Page with a list of turns. If you selected the **Off Road** option you can view only the list of points for a route from the Active Route Page. See Routing Setup on page 60.

To preview the turns for an active route:

1. On the Routes Page, highlight a saved route, and press **ENTER** to open the Route Page for the selected route.
2. Highlight the **Navigate** button, and press **ENTER** to begin navigation and show the route on the Map Page.

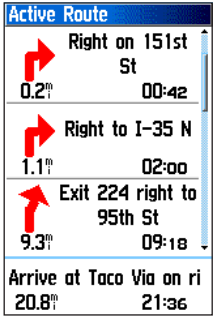
Route Page



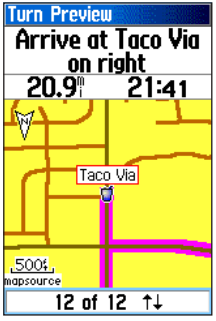
Route on the Map Page

3. To view the list of turns on the route, press **PAGE** to open the Active Route Page. To view an individual turn on the list, use the **ROCKER** to highlight it, and press **ENTER**.

   The Turn Preview Page shows the turn and guidance text and a small field at the bottom showing the turn number in sequence and total turns in the route.



Active Route Page when following roads



Turn Preview Page

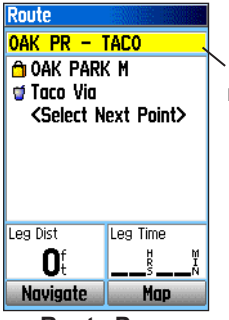
4. To scroll through all turn previews, press up or down on the **ROCKER**. Press **QUIT** to close the Turn Preview Page and return to the Active Route Page.

Editing a Route

After you create a route, use the Route Page to edit, change the route name, and review route points.

To change the name of the route:

1. Press **MENU** twice to open the Main Menu.
2. Highlight the **Routes** icon, and press **ENTER** to open the Routes Page.
3. Select a saved route, and press **ENTER**.
4. Highlight the route name field at the top of the Route Page, and press **ENTER**.



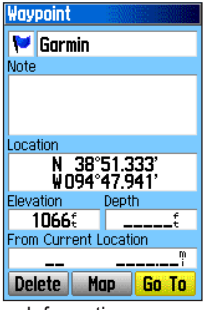
Route Page

5. Use the **ROCKER** to operate the on-screen keypad and edit the route name.

To review individual route points:

1. Press **MENU** twice to open the Main Menu.
2. Highlight the **Routes** icon, and press **ENTER** to open the Routes Page.
3. Select a saved route, and press **ENTER**.
4. Highlight a point on the Route Page, and press **ENTER** to open an options menu.
5. Highlight **Review** and press **ENTER** to open the information page for the route point.

Route point review options



Information page

6. Select **Save** (save the point as a waypoint), **Map** (show the point on the Map Page), or **Go To** (navigate to the point), and press **ENTER**.

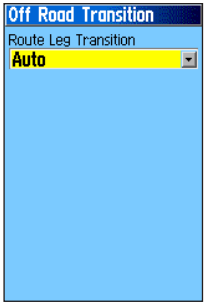
To delete a route:

1. Press **MENU** twice to open the Main Menu.
2. Highlight the **Routes** icon, and press **ENTER** to open the Routes Page.
3. Press **MENU** to open the Options Menu.
4. Highlight **Delete All Routes**, and press **ENTER** to clear the list of saved routes. A confirmation message appears, asking "Do you really want to delete all routes?" Select **Yes**, and press **ENTER**.

To select the off-road transition for a route:

1. Press **MENU** twice to open the Main Menu.
2. Highlight the **Routes** icon, and press **ENTER** to open the Routes Page.
3. Press **MENU** to open the Options Menu.
4. Select **Off Road Transition**, and press **ENTER** to open the Off Route Transition Page.
5. Highlight the **Route Leg Transition** field, and press **ENTER** to view the list of options.
6. Select the method to use (**Manual** or **Distance**) when advancing the route to the next point.

Route leg transition options



Select **Distance** to enter a radius so that when you are within the entered distance, the GPSMAP 60Cx leads you to the next point on your route.

Select **Manual** to transition to the next waypoint anytime while navigating a route.

Using the Route Page Options

The Route Page shows all points stored in memory for the route selected on the Routes Page. Press **MENU** to open the Route Page Options Menu. Select the option and press **ENTER** to display the option page.

Options Menu

Remove All—removes all waypoints from the saved route.

Reverse Route—reverses the order of the route points in the saved route.

Profile—creates a vertical profile of the route.

NOTE: *This option is available only if Garmin MapSource U.S. Topo 24K map data is used. Refer to the Garmin web site, www.garmin.com/cartography/onthetrail/, for more information.*

Copy Route—makes a copy of the saved route with the same name, only followed by a number.

Delete Route—deletes the saved route.

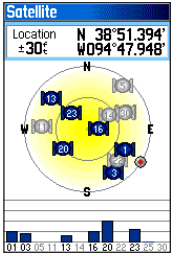
Change Data Fields—select different values for the two data fields at the bottom of the page.

Restore Defaults—restore route settings to the factory default settings.

MAIN PAGES

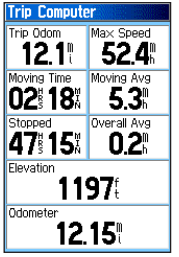
The GPSMAP 60Cx has six main pages: Satellite Page, Trip Computer Page, Map Page, Compass Page, Altimeter Page, and the Main Menu. You can cycle through these pages by pressing the **PAGE** key to move forward or pressing the **QUIT** key to reverse. Additional pages can be added using the Page Sequence option on the Main Menu. The Active Route Page appears only when you are actively navigating.

Each page has an Options Menu, which contains the setup options and functions that apply to the page. To view the Options Menu for a page, press the **MENU** key.



Satellite Page

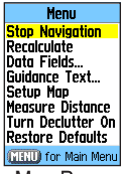
Satellite Page Options Menu



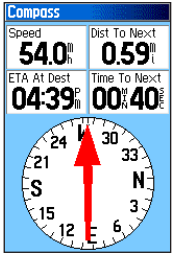
Trip Computer Page

Trip Computer Page Options Menu

Map Page

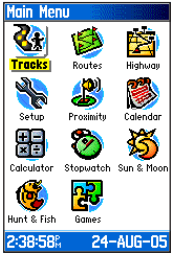


Map Page Options Menu



Compass Page

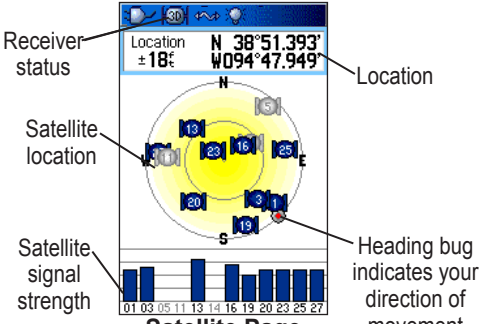
Compass Page Options Menu



Main Menu

Satellite Page

The Satellite Page shows the receiver status, satellite locations, satellite signal strength, and the receiver's current location when the unit receives signals from at least three satellites.



Satellite Page

Using the Satellite Page Options Menu

Press **MENU** to open the Options Menu.

Use With GPS Off/On—enables you to turn the GPS receiver on or off.

Track Up/North Up—indicates whether satellites are shown with the rings oriented with North toward the top of the display or your current track toward the top of the display

Multicolor/Single Color—indicates whether each satellite is shown in a different color or the same color.

New Location—use if you have moved the unit more than 600 miles and you are having trouble locking onto satellite signals.

GPS Elevation—shows GPS determined elevation.

Map Page

The GPSMAP 60Cx comes with a built-in basemap that includes a database of cities, interstates, state and county highways, exit information, and lake and river outlines. The standard basemap can be enhanced using MapSource or BlueChart data.

Two map operating modes, position mode and pan mode, determine what cartography is shown on the map display. Position mode pans the map to keep your present location in the display area. The position marker shows your travel on the Map Page. When you press the **ROCKER**, the GPSMAP 60Cx enters pan mode, which moves the map to keep the white arrow (map pointer) within the display area.

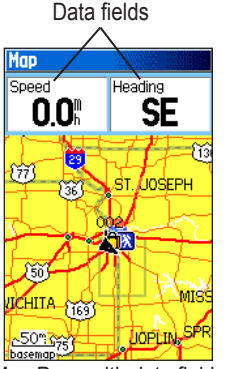
When you are in panning mode, you can move the map pointer about the page to highlight and identify map items. If there is more than one map item under the pointer, a list appears with the item highlighted on the map, also highlighted on the list.

You can add and configure up to four optional data fields to the top of the page to provide a variety of travel and navigational information.

To show data fields on the Map Page:

1. Press **MENU** to open the Map Page Options Menu.
2. Highlight **Data Field**, and press **ENTER**. The Show sub-menu appears.
3. Select the number of data fields you want to show on the Map Page, and press **ENTER**.

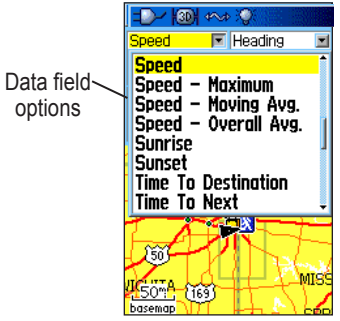
Show sub-menu



Map Page with data fields

To change a data field display:

1. Press **MENU** to open the Map Page Options Menu.
2. Highlight **Change Data Fields**, and press **ENTER**. The first data field is highlighted.
3. Press **ENTER** to open the list of data field options.



4. Use the **ROCKER** to select an option, and press **ENTER**.
5. Use the **ROCKER** to move to the next field and repeat steps 3 and 4.

For an explanation of each data field option, see page 76 in the Appendix.

Using Additional Map Data

Optional Map Source mapping data disks enhance the versatility of your GPSMAP 60Cx. With MapSource data disks, you can view listings of nearby restaurants, lodging, shopping centers, attractions and entertainment, and you can retrieve addresses and phone numbers for any listed location. With additional BlueChart data, you can access information such as marine navaids, wrecks, obstructions, and anchorage locations.

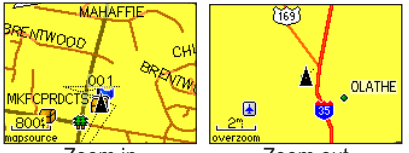
You can view the data currently loaded on your GPSMAP 60Cx unit and MicroSD card.

To review map information:

1. On the Map Page, press **MENU**.
2. Highlight **Setup Map**, and press **ENTER**.
3. Use the **ROCKER** to select the Map Setup-info page. The list of maps stored on the MicroSD card appears. A check mark indicates the map is shown on the Map Page.

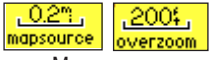
Changing the Zoom Range

You can change the Zoom Range on the Map Page to view a smaller area in greater detail or view a larger area with less detail. Press **IN** to decrease the Zoom Range and show an area with greater detail; press **OUT** to increase the Zoom Range and show a larger area with less detail.



Zoom in Zoom out

The current Zoom Range setting is shown in the lower left corner of the Map Page. If no further map information is available, “overzoom” appears under the Zoom Range When using MapSource detailed maps, “mapsource” appears below the scale.



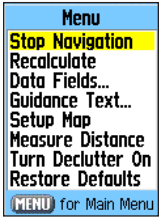
Map ranges

Map Orientation

There are two map orientation options: North Up orients the map like a paper map. Track Up orients the map in the direction of travel. When using Track Up, the North arrow indicates the orientation.

Map Page Options

Use the Map Page Options Menu to customize the Map Page. With the Map Page open, press **MENU**. To select an option, highlight it, and press **ENTER**.



The following options are available:

Stop (Resume) Navigation—stops navigation and is disabled when there is no active navigation.

Recalculate—recalculates a route and is disabled when there is no active navigation.

Data Fields—opens the Show sub menu so you can select the number of data fields to show at the top of the Map Page. Map Only, 2, 3, or 4 data fields.

Change Data Fields—allows you to select the type of data you want to show in the data fields. This option is available only if 2, 3, or 4 data fields is selected.

Guidance Text—shows messages on the screen advising you of your next navigation move when navigating to a destination.

Setup Map—access to six pages of Map display settings so you can customize the map to your preferences.

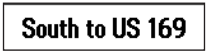
Measure Distance (Stop Measuring)—Measures the distance from your current location to the map pointer.

Turn Declutter On (Off)—eliminates the display of items on the map that can block road details when the map is zoomed out.

Restore Defaults—returns the map display to the factory set map display defaults.

Guidance Text

When navigating, guidance text appears above the map.



Guidance text

To show guidance text:

1. Press **MENU** to open the Map Page Options Menu.
2. Highlight **Guidance Text**, and press **ENTER**. The Guidance Text sub-menu opens.
3. Select an option (**Always Show**, **Never Show** or **Show When Navigating**), and press **ENTER**.

If you select **Always Show** a guidance message always appears whether or not you are navigating.

If you select **Show When Navigating**, a guidance message shows until you select **Stop Navigation** from the Options Menu.

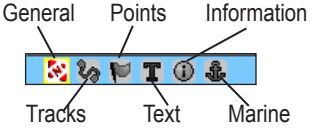
Guidance Text shows useful information when navigating to a destination.

Setting up the Map Page

Use the Setup Map option to adjust how items are shown on the Map Page

To customize the Map Page display:

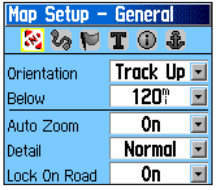
1. Press **MENU** to open the Map Page Options Menu.
2. Highlight **Setup Map**, and press **ENTER** to open the Map Setup Page. The top of the page contains icons for each setup page.
3. Use the **ROCKER** to move from icon to icon when selecting a map setup page and to move up and down the feature fields on each page.



4. With a Map Setup feature highlighted, press **ENTER** to show the list of options for that feature. Each map setup page has a sub menu of general options. To access this menu, press the **MENU** key with the page displayed.

Map Setup – General Page

The Map Setup – General Page contains the settings for Orientation, Below, Auto Zoom, Detail, and Lock On Road.



Map Setup – General Page

Orientation—select how the map is shown. **North Up** always shows north at the top of the page. **Track Up** shows your current track toward the top of the page.

Below—set the map scale at which the Track Up feature displays, all scales above that revert to the North Up map orientation.

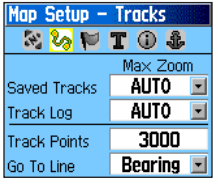
Auto Zoom—zoom the map scale to include the beginning and ending points of the route segment.

Detail—select the degree of map detail shown.

Lock On Road—you can lock the map pointer to show on the nearest road, compensating for variances in map position accuracy.

Map Setup – Tracks Page

The Map Setup – Tracks Page contains settings for Saved Tracks, Track Log, Track Points and the Go To Line.



Map Setup – Tracks Page

Saved Tracks—set the maximum zoom range at which saved tracks are shown on the map.

Track Log—set the maximum zoom range at which active track logs are shown.

Track Points—set the maximum number of track points used to record a track

Go to Line—select either a bearing or course line for navigating a track.

Map Setup – Points Page

Us the Map Setup – Points Page to set the map scale at which **Map Points**, **User Waypoints**, **Street Label**, and **Land Cover** appear on the Map Page. Select **Auto**, **Off**, or a specific zoom level.

Map Setup – Points Page

Map Setup – Text Page

Use the Map Setup – Text Page to select the text size for descriptions of map items on the Map Page. You can select from Small, Medium, or Large.

Map Setup – Text Page

Map Setup – Information Page

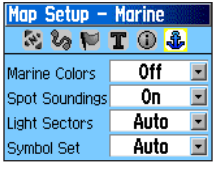
The Map Setup – Text Page shows a list of downloaded detailed maps such as topographic, marine charts, and MapSource maps with auto-routing capability. Use the **ROCKER** to highlight a map and press **ENTER** to show it on the map display or turn it off.

Map Setup – Information Page

Press **MENU** to view the list of options for displaying maps.

Map Setup – Marine Page

Use the Map Setup – Marine Page to customize settings for marine colors, spot soundings, light sectors, and symbol sets when using downloaded marine charts (MapSource BlueChart marine mapping data).



Map Setup – Marine Page

Marine Colors—toggles marine colors on or off on the Map Page.

Spot Soundings—toggles spot soundings on or off on the Map Page.

Light Sectors—select Off, Auto, or ON.

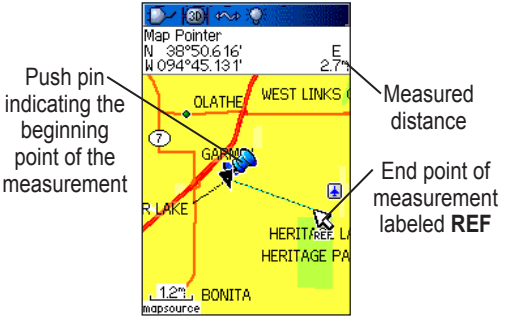
Symbol Set—select the symbol set to use (Auto, GARMIN, NOAA, International).

Measuring Distance

You can measure the distance between two map items.

To measure distance between two points:

1. Press **MENU** to open the Map Page Options Menu.
2. Highlight **Measure Distance**, and press **ENTER**. An on-screen arrow appears on the map display at your current location with **REF** below it.
3. Move the arrow to the reference point (the starting point you want to measure from), and press **ENTER**. A push pin icon marks the starting point on the map.
4. Move the arrow to the point you want to measure to. The distance between the two points is shown in the upper-right corner of the Map Page.
5. Press **QUIT** to cancel.

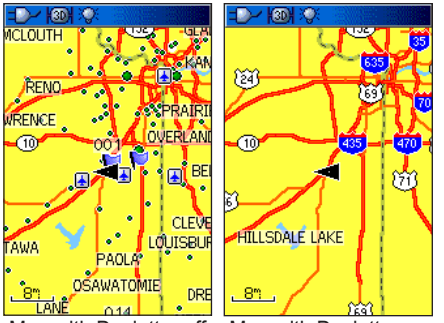


Turning Declutter On or Off

You can remove unwanted items from the Map Page display (declutter the display) such as map item titles and icons. This is useful when the map is zoomed to a scale that is partially obscured by titles and icons that remain the same size regardless of the map scale.

To turn declutter on or off:

1. Press **MENU** to open the Map Page Options menu.
2. Highlight **Turn Declutter On**, and press **ENTER**.
3. To turn Declutter off, press **MENU**, select **Turn Declutter Off**, and press **ENTER**.



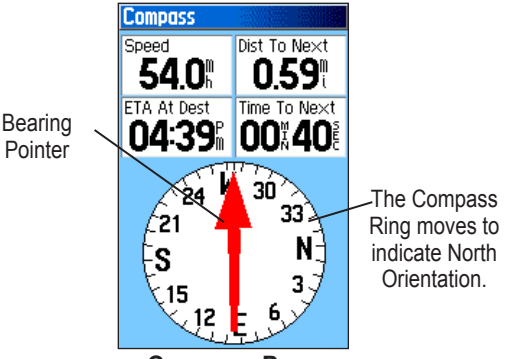
Map with Declutter off Map with Declutter on

Restoring Defaults

Use the **Restore Defaults** option to return the map settings to factory settings.

Compass Page

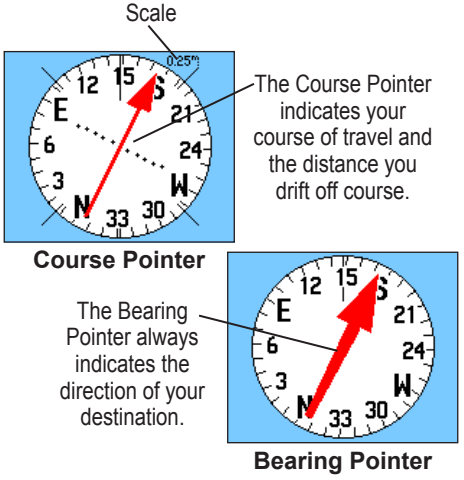
During active navigation, the Compass Page guides you to your destination with a graphic compass display and a bearing pointer.



Compass Page

When navigating, the Compass Page provides navigation data and directions. It uses a graphic compass ring, a bearing/course pointer and digital data fields to show information such as current speed, distance to the next point on the route, estimated arrival time.

The rotating compass ring indicates the direction you are heading. The Bearing/Course Pointer indicates the direction (bearing) to your destination, relative to your current heading direction. The compass ring and bearing pointer work independently to show your direction of movement and the direction to your destination. You can choose a Bearing Pointer or Course Pointer for guidance.

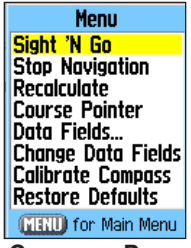

Scale
The Course Pointer indicates your course of travel and the distance you drift off course.
The Bearing Pointer always indicates the direction of your destination.

Course Pointer

Bearing Pointer

Compass Page Options

Use the options menu to customize the Compass Page. With the Compass Page open, press **MENU**. To select an option, highlight it, and press **ENTER**.



Compass Page Options Menu

The following options are available:

Stop (Resume) Navigation—turns active navigation for a route or a Go To on or off.

Recalculate— recalculates to path to a destination.

Course (Bearing) Pointer—toggles between the course arrow and the bearing pointer.

Data Fields—allows you to select the number of data fields that appear on the Compass Page.

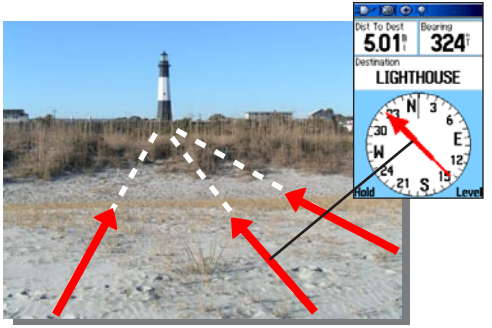
Change Data Fields—allows you to select the type of data you want to show in the data fields. See page 80 for descriptions of each option.

Restore Defaults—returns to the factory settings.

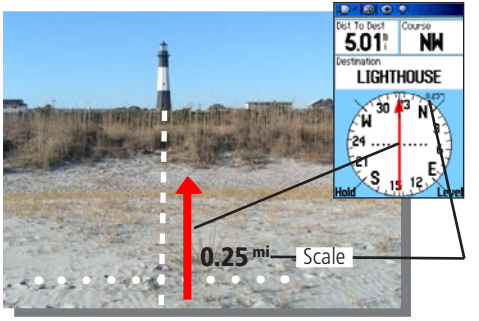
Using the Course Pointer or Bearing Pointer

The Bearing Pointer and Course Pointer work independently of each other. One indicates the direction to your destination, and the other indicates your relationship to a course line leading to the destination.

If the Bearing Pointer arrow is pointing straight up, for example, you are going directly to your destination. If it points any direction other than up, turn toward that direction until the arrow is pointing up and then continue in that direction. The Bearing Pointer always points to the destination, regardless of the direction you are moving. Most efficient if you must move around obstacles (lakes, private property, etc.) in your path.



The Bearing Pointer always indicates the direction to your destination from your current location.



The Course Pointer indicates your course of travel from your original location and the distance off course.

If you are using the Course Pointer option, and you drift away from the line of travel from your original location to your destination, the Course Deviation Indicator (arrow with horizontal dotted line) provides graphic indication of drift (right or left) according to the scale shown at the edge of the compass ring. Move to the right or left to get back on course. Most efficient if you are navigating on water or where there are no major obstacles in your path.

To select the Course Pointer or the Bearing Pointer:

1. Press **MENU** to open the Compass Page Options menu. The Bearing Pointer is the factory set default option. When the Bearing Pointer option is shown, the Course Pointer is active and vice versa.
2. Highlight this option and press **ENTER** to activate.

Data Fields

You can show three or four data fields on the Compass Page.

3 Data Fields 4 Data Fields

To show data fields on the Compass Page:

1. Press **MENU** to open the Compass Page Options menu.
2. Highlight **Data Field**, and press **ENTER**. The Show sub-menu appears.
3. Select the number of data fields you want to show on the Compass Page (three or four), and press **ENTER**.

To change data fields:

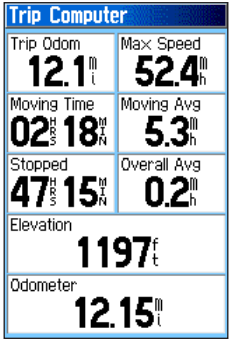
1. Press **MENU** to open the Compass Page Options menu.
2. Highlight **Change Data Fields**, and press **ENTER**. The first data field is highlighted.
3. Press **ENTER** to select from a list of types of navigation data to display in that field.
4. Use the **ROCKER** to highlight the option you want, and press **ENTER** to place it in the data field.
5. After making your selection and entry, use the **ROCKER** to move to the next field and repeat the process.
6. Repeat Step 3 to change remaining data fields.

To restore data fields to default settings:

1. Press **MENU** to open the Compass Page Options menu.
2. Highlight **Restore Defaults**, and press **ENTER** to return the page to factory settings.

Trip Computer Page

The Trip Computer Page provides you with a wide variety of travel data useful when navigating a long distance. It indicates your current speed, average speed, trip odometer and many other helpful statistics useful for navigation.



Trip Computer Page

You can customize the Trip Computer display to meet your personal requirements, with list of data options to choose from. Selecting the type of data to display is done in the same manner as for the similar data fields on the Map Page. (See page 40 for details.)

Trip Computer Page Options Menu

The following options are available:

Reset—Because you want to record new data for each trip, a "Reset" option is available.

Before each trip, reset the trip information by highlighting "Reset" and pressing **ENTER**.

The Reset Page offers options for resetting trip computer data, clearing the Track Log and deleting Saved Tracks, Waypoints and Routes. This page allows you select individual items, select all and unselect all. Once your selections are made, highlight the "Apply" button and press **ENTER**. Answer "**OK**" to the "The Data You Have Selected Will Be Permanently Deleted" prompt and press **ENTER** to complete the reset.

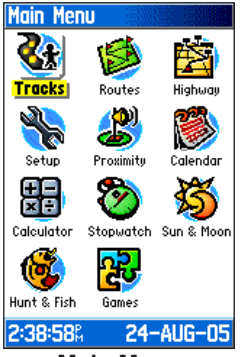
Big Numbers—allows you to view significant trip at a glace, which shows fewer fields with larger displays.

Change Data Fields—allows you to select the type of data you want to show in the data fields.

Restore Defaults—allows you to return the page to factory settings.

Main Menu

The Main Menu contains settings and features not found on the main pages and submenus, The time and date are shown at the bottom of this page. The Main Menu is accessible from any page by pressing **MENU** twice. To select an item on the Main Menu, highlight the menu item, and press **ENTER**.



Main Menu

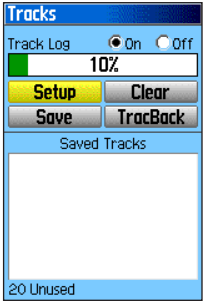
NOTE: If a page is added to the sequence, the icon does not appear on the Main Menu.

Tracks

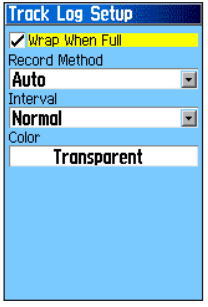
The Tracks Page shows the percentage of track memory used, and a list of saved tracks. Use the Tracks Page to set up, clear, or save a track log, or activate the TracBack feature for the current track log.

To access the Tracks Page:

1. Press **MENU** twice to open the Main Menu.
2. Select the **Tracks** icon, and press **ENTER**.
3. Highlight the **Setup** button, and press **ENTER** to open the Track Log Setup Page.



Tracks Page



Track Log Setup

Track Page Options

The Track Log Setup Page contains the following options:

Wrap When Full—select this option to record over the oldest data with new data when the track log is full

Record Method—select the method to use to record track points. **Distance** records track points after a specific distance is traveled. **Time** creates track points after the specified time has elapsed. **Auto** allows you to choose from five different intervals.

Interval—records a track according to the value and interval. Enter a specific distance or time. The interval field only appears when the **Record Method** is set to Distance or **Time**.

Color—select a color for the track when it appears on the map.

Route Page

Use the Routes page to create a route to a destination.. For more information, see Routes on page 31.

Highway Page

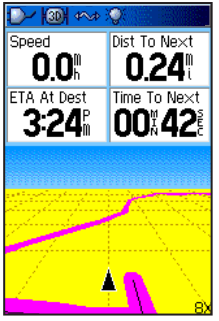
When navigating a route, the Highway Page guides you to the destination using data fields and a graphic highway. Up to four user selectable data fields show information such as speed, distance, time to next point on the route, etc. The list of data to display and the method of selection is the same as for the Map and Compass Pages and is explained in detail on page 40.

The Highway graphic provides visual guidance, taking you point by point to your final destination. Your course is represented by a center line down the middle of the graphic. As you move toward each point on your route, the graphic will show the direction you should move to stay on course to the point. Five scale settings allow you to Zoom In or Out on the highway.

To navigate using the Highway Page:

1. While navigating, access the Highway Page from the Main Menu and observe your path of travel displayed on the highway graphic.
2. Press **MENU** to display the Options Menu. You can do the following:

   Stop Navigation, Configure Data Fields from four to three with a destination guidance message, Change the Data Fields or restore Defaults to factory settings.



Highway Page

Setup Menu Page

Use the Setup Menu Page to customize your GPSMAP 60Cx to your personal preferences.

To access the Setup Menu Page:

1. Press **MENU** twice to open the Main Menu.
2. Use the **ROCKER** to highlight the **Setup** icon, and press **ENTER**.

Setup Menu Page

Each feature is explained on the pages that follow.

System Setup

Use the System Setup Page to control settings for GPS, WAAS, battery type, language, external power and custom POI proximity alarms.

To access the System Setup Page:

On the Setup Menu Page, highlight the **System** icon, and press **ENTER**.

System icon

GPS—sets the unit to operate in **Normal** mode, **Battery Saver** mode, **GPS Off**, or **Demo Mode**.

WAAS—allows you to enable or disable WAAS (see page 80 for an explanation of WAAS).

Battery Type—allows you to select the battery type you are using (Alkaline or NiMH).

Text Language—sets the unit's on-screen language.

External Power Lost—indicates whether the unit remains on (Stay On) or turns off (Turn Off) when external power is removed from the unit.

Proximity Alarms—indicates whether custom POI proximity alarms are on or off.

System Setup Menu

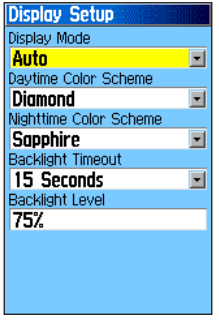
The System Setup Menu contains **Restore Defaults** and **Software Version**. Use **Restore Defaults** to return the System Setup fields to their original values. **Software Version** shows the Software Version and Unit Id number.

Display Setup

Use the Display Setup Page to select a screen display color scheme for day and night viewing. You can set the backlight timeout and the level of brightness. Shortening these times can significantly save on battery power.

To access the Display Setup Page:

On the Setup Menu Page, highlight the **Display** icon, and press **ENTER**.



Display Mode—sets the display to **Day**, **Night**, or **Auto** mode. Select **Auto** to automatically switch from day to night at sunset and change back at sunrise.

Daytime Color Scheme/Nighttime Color Scheme—select the color scheme to use when operating in Day or Night mode.

Backlight Timeout—sets the backlight to stay on when it is turned on, or to time out after a selected period of time has elapsed when using the battery. The backlight stays on regardless of this setting when external power is used.

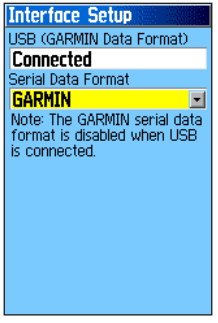
Backlight Level—turns the backlight up or down. Press up on the **ROCKER** to increase the intensity or down to decrease.

Interface Setup

Use the Interface Setup Page to control the input/output format used when connecting your unit to external devices.

To access the Interface Setup Page:

On the Setup Menu Page, highlight the **Interface** icon, and press **ENTER**.



Serial Data Format—sets the data format to one of the following:

- **GARMIN**—the proprietary format used to exchange waypoint, route, track log and MapSource data with a PC.
- **NMEA In/NMEA Out**—Supports input and output of standard NMEA 0183 version 3.01 data.
- **TEXT OUT**—Allows ASCII text output of location and velocity information. No input.
- **NONE**—Provides no interfacing capabilities.

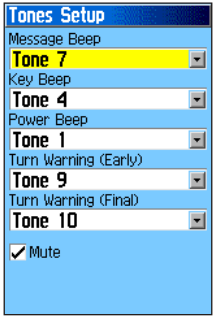
If you select NMEA In/NMEA Out or Text Out, additional fields will appear. The baud rate for NMEA In/NMEA Out is locked at 4800. If selecting Text Out highlight the **Baud Rate** field, and press **ENTER**. Use the **ROCKER** to highlight the desired setting and press **ENTER**.

Tones Setup

Use the Tones Setup Page to customize sound tones made by the unit. tones for a variety of unit features.

To access the Tones Setup Page:

1. On the Setup Menu Page, highlight the **Tones** icon, and press **ENTER**.



2. Highlight the desired option and press **ENTER**. As you move down the list each different tone will sound.
3. As you move down the list each different tone sounds. Press **ENTER** to select a tone.

Page Sequence Setup

Use the Page Sequence Setup Page to change the order of the main pages, or add additional pages to the main page sequence when you press **PAGE** repeatedly.

NOTE: If you add a page to the main page sequence, it will no longer appear on the Main Menu.

To access the Page Sequence Setup Page:

On the Setup Menu Page, highlight the **Page Sequence** icon, and press **ENTER**.

To move, insert, or remove a page:

1. To move a page in the order, highlight the page, and press **ENTER**. Select **Move**, and press up or down on the **ROCKER** to move the page up or down in the list. Press **ENTER** when finished.
2. To insert a new page, highlight the page you want to insert before in the order, and press **ENTER**. Select **Insert**, then select a page from the list, and press **ENTER**.
3. To remove a page, highlight the page and press **ENTER**. Select **Remove**, and press **ENTER**.

Map Page Setup

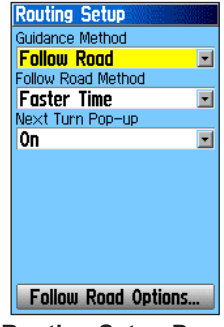
The Map Page Setup information is located on page 43.

Routing Setup

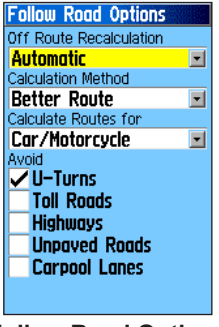
Use the Routing Setup Page to customize the manner in which routing functions behave.

To access the Routing Setup Page:

1. On the Setup Menu Page, highlight the **Routing** icon, and press **ENTER**.
2. Highlight the **Follow Road Options** button to open the Follow Road Options Page where you can select additional route options.



Routing Setup Page



Follow Road Options

Guidance Method—allows the unit to calculate routes based on:

- **Prompted**—you are prompted to select a preference before the route is calculated.
- **Follow Road**—creates a route that overlays the roads shown on the map.
- **Off Road**—creates a direct line from your current location to your destination. This is useful when traveling outside of the detailed map coverage area or where no roads exist.

Follow Road Method—select how the unit calculates follow road routes based on:

- **Prompted**—you are prompted to select a preference before the route is calculated.
- **Faster Time**—routes calculated are faster to drive but might be longer in distance.
- **Shorter Distance**—routes calculated are shorter in distance but take more time to drive.

Next Turn Pop-up—turns the Next Turn pop-up window on or off.

Follow Road Options

Off Route Recalculation—allows you to set whether the unit prompts you when it is recalculating your route (Prompted) or recalculates automatically. You can turn off-route recalculation off.

Calculation Method—sets how the unit searches for the route.

- **Quickest Calculation**—calculates the route the quickest, but it might not produce the best route.
- **Quick Calculation**—takes more time to calculate but generates a better quality route.
- **Better Route**—generates an even better quality route but uses a longer calculation time.
- **Best Route**—generates the optimal route but takes the longest time to calculate.

Calculate Routes For—sets route calculation for the vehicle you are operating to optimize the route for your vehicle type, as some roads have vehicle-based restrictions.

Avoid—allows you to avoid certain road types and maneuvers on your route.

Geocache Setup

Use the Geocache Setup Page to find and record items hidden at geographic locations. See the Garmin Web site (www.garmin.com) for details and how to download geocache locations from the Internet .

NOTE: Before setting up and placing physical geocache stations on public or private land, be certain you are not in violation of ordinances or laws governing use of these properties.

To access the Geocache Setup Page:

On the Setup Menu Page, highlight the **Geocache** icon, and press **ENTER**.

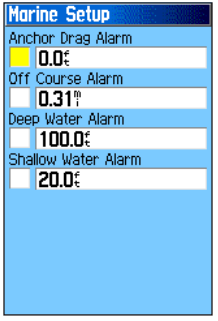
Geocache Setup
Geocache Symbols
Find
Found
Calendar Entry When Found
Yes
Find hidden treasures using GPS coordinates posted on the Internet by those hiding the cache. Find the cache, fill out the logbook, take something out, put something back in, and return the cache. Visit http://www.garmin.com/outdoor/geocaching/ for more details.

Marine Setup

Use the Marine Setup Page to define alarm settings.

To access the Marine Setup Page:

On the Setup Menu Page, highlight the **Marine** icon, and press **ENTER**.



Anchor Drag Alarm—sets an alarm to sound when you exceed a specified drift distance.

Off Course Alarm—sets an alarm to sound when you are off your desired course.

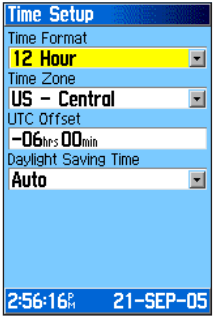
Deep Water Alarm/Shallow Water Alarm—sets an alarm to sound when you enter an area of water that is too deep or too shallow.

Time Setup

Use the Time Setup Page to set the time format and zone, and set the unit to conform to Daylight Saving Time. The current time and date appear at the bottom of the page.

To access the Time Setup Page:

On the Setup Menu Page, highlight the **Time** icon, and press **ENTER**.



Time Zone—choose the time zone for your city so the GPSMAP 60Cx will show the correct local time. Select **Other** to enter a UTC Offset.

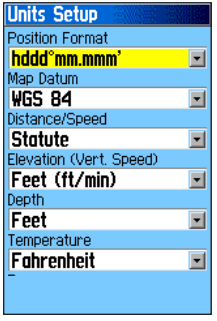
Units Setup

Use the Units Setup Page to customize measurement units.

To access the Units Setup Page:

On the Setup Menu Page, highlight the **Units** icon, and press **ENTER**.

Units icon



Position Format—the coordinates for the system in which a particular location is shown. The default format is latitude and longitude in degrees, minutes, and thousandths of a minute (hddd°mm.mmm).

Map Datum—these describe geographic location for surveying, mapping, and navigation and are not actual maps built into the unit. The default setting is WGS 84. The unit automatically chooses the best datum based on your chosen format.

For more information about selecting Position Formats and Map Datums, see page 82.

Distance/Speed—select the unit of measurement to show your speed and distance traveled.

Elevation (Vert. Speed)—select the unit of measurement (**Feet (ft/min)**, **Meters (m/min)**, or **Meters (m/sec)**) to show your altitude.

Depth—select the unit of measurement (**Feet**, **Fathoms**, or **Meters**) to show the depth.

Temperature—select the unit of measurement (**Fahrenheit** or **Celsius**) to show temperature.

Pressure—select the unit of measurement (**Inches**, **Millibars**, or **Hectopascals**) to show pressure.

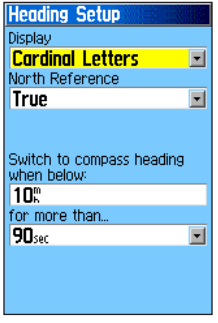
Heading Setup

Use the Heading Setup Page to specify the type of heading display and the type of North reference used to calculate your heading.

NOTE: Unless you have a working knowledge of Headings and North Referencing, it is recommended that you use the default values.

To access the Heading Setup Page:

On the Setup Menu Page, highlight the **Heading** icon, and press **ENTER**.



Display—select the value (Cardinal Letters, Degrees, or Mils) to show your heading.

North Reference—provides headings based on a true north reference.

Switch to compass heading when below (for more than the user selected distance)—Select speed and time delay for electronic compass switching.

Welcome Setup

Use the Welcome Setup Page to insert a message, such as ownership information, that appears when you turn on your GPSMAP 60Cx.

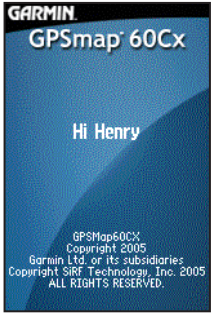
Adding a welcome message

To access the Welcome Setup Page:

On the Setup Menu Page, highlight the **Welcome Message** icon, and press **ENTER**.

To add a welcome message:

1. Use the on-screen keypad and the **ROCKER** to enter your welcome message, and press **ENTER**.
2. When finished, highlight **OK**, and press **ENTER** to close.
3. Turn you unit off and then on again to view your Welcome message.



Welcome message

Proximity Waypoints

Use the Proximity Waypoints Page to define an alarm circle around a stored waypoint location. The alarm circle can help you avoid restricted locations.

For more information on proximity waypoints see the "Proximity Waypoints" section on page 15.

Calendar

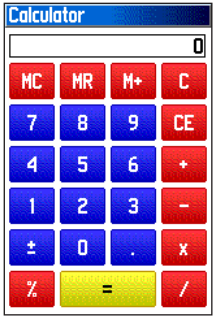
Use the Calendar to view sunrise/sunset times, moon phase, hunt and fish probabilities, archived waypoints for activities you want to navigate to for any given day and location.

To use the Calendar:

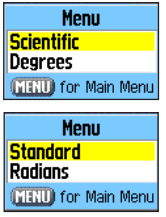
1. Press **MENU** twice to open the Main Menu.
2. Select the **Calendar** icon, and press **ENTER**. The Calendar Page opens with the current week shown.
3. Use the **ROCKER** to highlight the day you want to add waypoints to and press **ENTER** to show the Page for that day.
4. Press **MENU** to open the Options Menu. Highlight **Add Point**, and press **ENTER** to open the Find Menu.
5. Select the type of point you want to place on the Day Page. (See page 16 for details on using the Find Feature) With the information page for that point displayed, highlight the **Use** button and press **ENTER** to place the point reference on the Day Page.
6. To remove points from a Day Page, press **MENU** to open the Options Menu. Select **Remove Points** and press **ENTER** to display the Remove Points Options List.
7. To view other calendar formats, Sun and Moon or Hunt and Fish extended data for a specific date and location, press **MENU** and use the **ROCKER** to make your choice.

Calculator

Select the **Calculator** icon to use your GPSMAP 60Cx as a calculator. You can select either a Standard or Scientific calculator and Degrees or Radians from the Options Menu.



Calculator Page



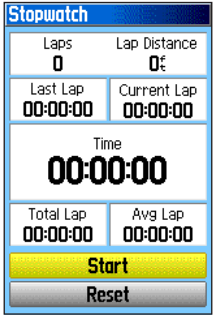
Options Menus

To use the Calculator:

1. Press **MENU** twice to open the Main Menu.
2. Select the **Calculator** icon, and press **ENTER**.
3. Use the **ROCKER** and the **ENTER** key to operate the calculator.

Stopwatch

Select the **Stopwatch** icon to use the GPSMAP 60Cx as a stopwatch, which includes a lap timer. You can also have the unit record the lap time based on distance.



To access the stopwatch:

1. Press **MENU** twice to open the Main Menu.
2. Select the **Stopwatch** icon, and press **ENTER**.

To start and stop the stopwatch:

1. Highlight the **Start** button, and press **ENTER** to start the stopwatch.

2. Highlight the **Stop** button, and press **ENTER** to stop the stopwatch.

To use the lap feature:

With the stopwatch running, highlight the **Lap** button, and press **ENTER**.

To reset the stopwatch:

With the stopwatch stopped, highlight the **Reset** button, and press **ENTER**.

To time lap by distance:

Press **MENU** to open the Options Menu. Choose **Lap by Distance** and press **ENTER**. To return to 'Lap by Button Press', repeat these same steps.

To set a lap distance value:

1. Press **MENU** to open the Options Menu. Choose **Set Lap Distance** and press **ENTER**.
2. Use the **ROCKER** to highlight the field you want to change and press **ENTER**. Enter the new value and press **ENTER**. When done, highlight **OK** and press **ENTER**.

Sun and Moon

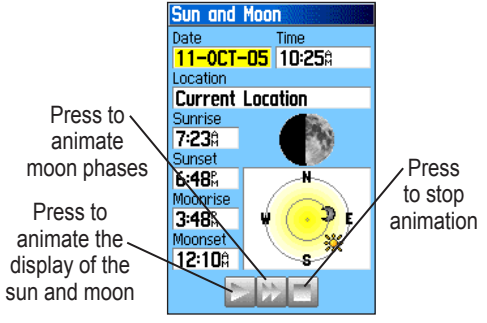
The Sun and Moon Page provides you with a graphic depiction of the sun and moon relative to the Earth. Sun and moon positions can be shown for any time, date, and location on Earth.

The Sun and Moon Page also shows sunrise, sunset, moonrise, and moonset times for a selected time, date, and location. Use the on-screen buttons to animate the movement of the sun and moon and stop at a given time or date. The button to the left animates the display of the sun and moon. The center button animates more rapidly, showing the phases of the moon. The right button stops animation.

To view sun and moon locations for a specified time, date, and location:

1. Press **MENU** twice to open the Main Menu.
2. Select the **Sun & Moon** icon, and press **ENTER**.
3. To view the predictions for a different date and time, highlight either the **Date** or **Time** field, and press **ENTER** to open the on-screen keypad.

4. To view the predictions for a different location, highlight the **Location** field, and press **ENTER** to open the New Location Options Menu and choose from the options shown.



Sun and Moon Page

Hunt and Fish

The Hunt and Fish Tables provide you with a listing of predicted best times for hunting and fishing for a chosen date and location.

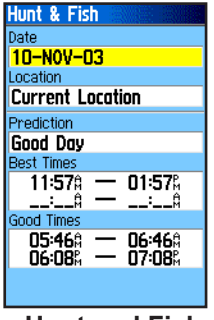
To show hunting and fishing predictions for a specified date and location:

1. Press **MENU** twice to open the Main Menu.
2. Select the **Hunt & Fish** icon, and press **ENTER**. The current date and location appear in the date and location fields at the top of the page.
3. To view the predictions for a different date, highlight the **Date** field and press **ENTER** to open the on-screen keypad.
4. To view the predictions for a different location, highlight the **Location** field, and press **ENTER** to open the "New Location" Options Menu.

   Choose **Use Map** to select a point on the map using the pointer arrow. Press **ENTER** to show the table for that location. The Location field will now state "Map Location".

Choose **Use Find Menu** to select a point from the Find Feature database. Follow instructions for using the Find Feature beginning on page 16. When a find item is selected, highlight the "Use" button at the bottom of the item information page and press **ENTER**. The Location field will now show the name of the find item.

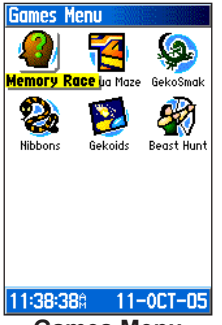
5. To return to the current date, press **MENU** and then **ENTER**.



Hunt and Fish Page

Games Menu

The Games Menu contains six games (Memory Race, Virtua Maze, GekoSmak, Nibbons, Gekoids, and Beast Hunt) for entertainment. Some games use GPS as a virtual component in the play.



Games Menu

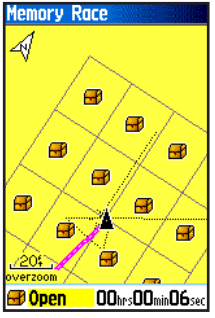
To select and play a game:

1. Press **MENU** twice to open the Main Menu
2. Select the **Games** icon, and press **ENTER**.
3. Use the **ROCKER** to highlight a game, and press **ENTER.** A brief description of each game appears.

4. Press **QUIT** and highlight Yes when prompted to stop playing.

WARNING: When playing any of the virtual games (where you are moving on a real playing field), use caution in selecting an area free of hazards such a holes, obstructions, or proximity to vehicular traffic. Playing these games may distract your attention from observing objects in your path.

Memory Race

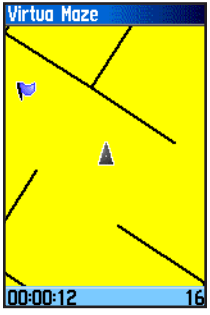


This is a GPS virtual game where the playing piece moves where you move. To win the Memory Race, remember which square has which symbol then clear the board by matching all of the two symbol sets together. Travel to each square, highlight **Open** at the bottom of the screen, and press **ENTER** to view the symbol.

To adjust the grid size in custom mode:

1. Highlight the **Grid Size** or **Square Size** field, and press **ENTER** to select from the options lists. Press **ENTER** to make your selection.
2. Highlight **Start**, and press **ENTER** to begin the game.
3. Highlight "Re-Center" and press **ENTER** to place yourself back in the middle of the game board.

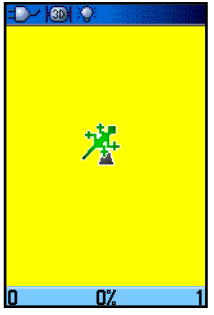
Virtua Maze



This GPS game creates a virtual maze on the screen. You are placed at a central position in the maze and must explore the maze collecting flags. The lower right corner of the screen tells you how many flags remain. The lower left corner contains a timer showing the elapsed time. The difficulty level determines how much of the maze you can see at one time. Viewing less of the maze makes the game more difficult.

*TIP: Press **MENU**, and select **Cheat** to start cheat mode. Enabling this mode penalizes you by five minutes and counts seconds by 10 instead of 2. Press **ENTER** to turn off cheat mode.*

GekoSmak

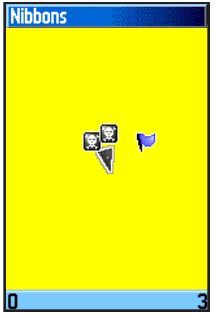


GekoSmak is a GPS-based game that features you as the player piece. Periodically, gekos appear on the screen. Before the geko disappears, move toward the geko and press **ENTER** to smack the geko with a hammer. If you get the geko, an "!" mark appears above the hammer, if not, only a hammer appears momentarily.

Field size choices are small, medium and large. Small fields are approximately 20 yards by 30 yards and large fields are 60 yards by 90 yards (about the size of an American football field).

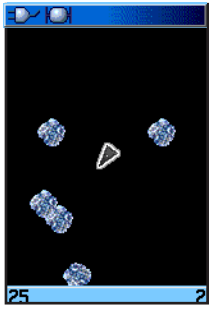
The difficulty levels are: Easy, Normal and Hard. These levels determine how often Gekos appear. The pace quickens and values vary as difficulty levels increase.

Nibbons



In this GPS game, you must walk around the board collecting the flags as they appear. As you walk, your "tail" will grow. You may travel anywhere on the screen but you cannot walk on your tail, or you will lose a life. As an added challenge, you must also avoid the skulls that chase after you.

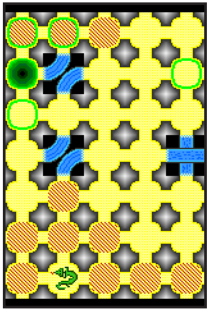
Gekoids



This GPS game, which can be played without GPS on, is all about blasting gekoids. The catch is, you are the ship and you can survive only when you avoid getting hit. Before you begin to play, be sure to make your game settings. Orient Map "Northwards" rotates your ship in the center of the map. The map is stationary and north is always up.

Orient Map "Ship Up" rotates the virtual world around your ship. Your ship always points Up. Press **ENTER** to start and blast away.

Beast Hunt



Although not a true GPS game, Beast Hunt requires some navigation skills. You must find and defeat the dragon with an arrow before it breathes fire at you or you fall into one of the pits while navigating a maze of platforms. Occasionally you are transported by slides that curve or move you diagonally. The game consists of several difficulty levels and an extended or limited visibility option. When you lose a game, the screen shows the layout of hazards, slide, and warning platforms. A scoreboard keeps track of your wins and loses.

To play Beast Hunt:

1. Select **Beast Hunt** from the Games Menu, and press **ENTER**. The game overview page appears.
2. Press **ENTER** to open the Difficulty Level menu. Select a difficulty level (**Trainee**, **Beginner**, **Expert**, or **Master**), and press **ENTER** to open the Visibility menu.
3. Select a visibility option (**Extended** or **Limited**), and press **ENTER** to begin play.
4. Use the **ROCKER** to jump from platform to platform.

   When you land on a shaded platform, you are one or two steps from the dragon. A platform with a circle is next to a pit. If you fall into a pit, jump into the dragon or shoot an arrow at where you think the dragon is, and miss, you lose.
5. To defeat the dragon, press **ENTER** to place an arrow in a shaded platform. Use the **ROCKER** to point and press **ENTER** to shoot.

Appendix

Specifications

Physical

Size: 6.1" H x 2.4" W x 1.3" D

Weight: 7.5 ounces (213 g) w/batteries installed.

Display: 1.5" W x 2.2" H, 256-color, high resolution, transreflective (160 x 240 pixels) with backlighting.

Case: Rugged, fully gasketed, water resistant, IEC-529, IPX7

Temp Range: 5 to 158°F (-15 to 70°C)*

*The temperature rating of the GPSMAP 60Cx may exceed the usable range of some batteries. Some batteries can rupture at high temperatures.

Performance

Receiver: WAAS enabled

Acquisition Times*:
Approx. 1 second (warm start)
Approx. 38 seconds (cold start)
Approx. 45 seconds (factory reset)

*On average for a stationary receiver with an open sky view.

Update Rate: 1/second, continuous

Antenna: Built-in quad helix, remote antenna capability.

Power

Source: Two 1.5 volt AA batteries, USB Data Cable, 12 V Adapter Cable, or up to 36 VDC external power

Battery Life: Up to 18 hours (typical use)*

*Alkaline batteries lose a significant amount of their capacity as the temperature decreases. Use Lithium batteries when operating the GPSMAP 60Cx in below-freezing conditions. Extensive use of screen backlighting, electronic compass, and audible tones significantly reduce battery life.

Accuracy

GPS: <10 meters (33 feet) 95% typical*

*Subject to accuracy degradation to 100m 2DRMS under the U.S. DoD imposed Selective Availability (SA) Program when activated.

DGPS: 3-5 meters (10-16 feet) 95% typical*

*WAAS accuracy in North America.

Velocity: 0.05 meter/sec steady state

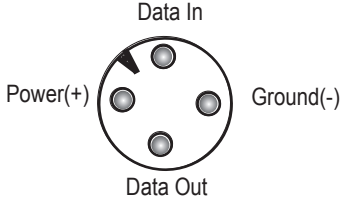
Interfaces: NMEA 0183 version 2.3, and RS-232 and USB for PC interface

Data Storage Life: Indefinite: no memory battery required

Map Storage: Dependant on the formatted capacity of the MicroSD Digital Card

(A small portion of the card capacity has been used in formatting the card for use.)

Use the USB Data Cable provided with the product or optional Power/Data Serial Port Cable with Auxiliary AC Power Adapter or Power/Data Serial Port Cable with Bare Wire Leads.
Refer to the Garmin web site: www.garmin.com/products/gpsmap60cx/



Unit Power/Data Port View

Interfacing

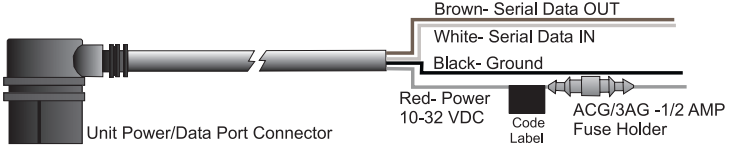
The following formats are supported for connection of external devices.

Garmin Proprietary Sentences—PGRME (estimated error), PGRMM (datum string), PGRMZ (altitude).

The NMEA 0183 version 3.01 interface format is supported by the GPSMAP 60Cx and enables the unit to drive up to three NMEA devices.

The following are the sentences for NMEA 0183, version 3.01 output:

Approved sentences—GPGGA, GPGLL, GPGSA, GPGSV, GPRMB, GPRMC, GPRTE, GPVTG, GPWPL, GPBOD, GPAPB



Optional Power/Data Serial Port Cable with Bare Wire Leads

Data Field Definitions

The following list provides a brief definition of each data field option. Some of these options are supported only by devices interfaced to your GPSMAP 60Cx

Accuracy GPS - The current accuracy of you GPS determined location.

Ambient Pressure - The uncalibrated current pressure.

Ascent-Average - The average vertical distance of ascents.

Ascent-Maximum - The maximum ascent rate in feet per minute.

Ascent-Total - The total distance ascended.

Barometer - The calibrated current pressure.

Bearing - The compass direction from your current position to a destination point.

Course - The desired path of travel from your starting point to your destination point.

Depth - The depth of water from sonar NMEA input.

Descent-Average - The average vertical distance of descent.

Descent-Maximum - The maximum descent rate in feet per minute.

Descent-Total - The total distance descended.

Distance - Next - The distance to the next point on a route.

Distance - Destination - The entire distance, from beginning to end, of a route.

ETA - Next - The estimated time that you will arrive at the next point on your route, if you maintain your current speed and course.

ETA - Destination - The estimated time that you will arrive at your destination, if you maintain your current speed and course.

Elevation - The distance above or below mean sea level.

Elevation-Maximum - The highest elevation reached.

Elevation-Minimum - The lowest elevation reached.

Glide Ratio - The ratio of horizontal distance traveled to vertical distance.

Glide Ratio Dest - The glide ratio required to descend from your present position and elevation to the destination's elevation.

Heading - Your direction of travel as indicated by a compass, in degrees or cardinal letters (N,S,E,W).

Location (lat/lon) - Your current location as latitude/longitude coordinates.

Location (selected) - Your current location described in the selected units of measure (other than lat/lon).

Odometer - The total distance you have traveled for all trips.

Off Course - The distance off your direct course line.

Pointer - The arrow that indicates the direction to travel to the next point on a route.

Speed - Your current vehicle speed can be measured in miles per hour, kilometers per hour or knots.

Speed - Maximum - The maximum speed you have attained since the Trip Computer was reset.

Speed - Moving Avg. - The average speed while your vehicle was moving.

Speed - Overall Avg. - The average speed determined by both the moving and stopped time and speed.

Sunrise - The time of sunrise for the current date and location.

Sunset - The time of sunset for the current date and location.

Time To Destination - The estimated time enroute to your final destination, if you maintain your current speed and course.

Time To Next - The estimated time enroute to the next point on your route, if you maintain your current speed and course.

Time of Day - The current time and date. It can be displayed in 12 or 24 hour format in local time or universal (UTC) time.

To Course - Your direction of travel to get back on course.

Trip Odometer - The running total of distance traveled since the Trip Computer was reset.

Trip Time - Moving - The length of time your vehicle has been in motion, since the Trip Computer was reset.

Trip Time - Stopped - The length of time that the vehicle has been stopped (stationary) while the unit was powered On and tracking your location (since the Trip Computer was reset).

Trip Time - Total - The total time the unit has been tracking since the Trip Computer was reset.

Turn - The direction of, and distance to, the next turn on an active route.

Velocity Made Good - The rate of closure on a destination based upon your current speed and course of travel.

Vertical Speed - The rate of altitude gain/loss over time.

Vertical Speed Dest - The measurement of your rate of acsent/decsent to a predetermined altitude.

Water Speed - The data acquired from measurement devices interfaced to the GPSmap 60CS is used to calculate your current speed over water.

Water Temperature - The temperature of water at a measured depth using measurement devices interfaced to the GPSMAP 60Cx.

Waypoint - Destination - The last point on a route, your destination.

Waypoint - Next - The next point on your route.

Optional Accessories

In addition to the standard accessories included with your GPSMAP 60Cx, several optional accessories are available to enhance the operation of the unit.

To obtain replacement parts and optional accessories, contact your Garmin Dealer, or Garmin Product Support in the U.S.A. at 800/800.1020, or Garmin Europe at 44/0870.8501241

WARNING: *Garmin accessories are designed and tested specifically for use with Garmin products. Accessories offered by other manufacturers have not been tested or approved for use with Garmin products. Use of such accessories could cause damage to the GPSMAP 60Cx and void the terms of the warranty.*

Auto Navigation Kit—provides the parts and map data to use the GPSMAP 60Cx in an automobile.

Cigarette Lighter Adapter—provides auxiliary power from an automobile cigarette lighter.

GA 25MCX Remote GPS Antenna—allows enhanced satellite acquisition. Includes magnetic mount and cable.

MapSource Software CD-ROMs—offers several detailed mapping options that are compatible with the GPSMAP 60Cx. Visit to Garmin web site at http://garmin.com/products/gpsmap60cx/ for a list of compatible MapSource products.

Serial Port PC Interface Cable with Auxiliary AC Power Supply—provides connection to a PC for data transfer.

Carrying Case—protects the GPSMAP 60Cx when not in use.

Marine Mount Kit—Allows installation on a boat.

Bicycle Handlebar Mount Kit—Allows installation on bicycle handlebar.

Battery Pack—Rechargeable, NiMH, AA battery kit, USA receptacle.

For a complete list of available accessories for use with the GPSMAP 60Cx, refer to the Garmin web site: http://garmin.com/products/gpsmap60cx/

Connecting Your GPSMAP 60Cx to a Computer

You can connect your GPSMAP 60Cx to your computer using either a serial port or USB connector cable.

NOTE: *Fully install the supplied MapSource program, Trip & Waypoint Manager, on your computer before connecting the USB cable to the computer.*

To connect your GPSMAP 60Cx to your computer:

1. Lift the USB protective cover from the back of the GPSMAP 60Cx and insert the smaller connector on the USB cable into the matching port.
2. Connect the remaining cable end to your computer's USB port.

To connect to your computer using a Serial Port connector:

1. Lift the Serial Port protective cover from the back of the GPSMAP60CSx and insert the round indexed connector on the cable into the matching port.
2. Connect the remaining cable end to your PC Serial port or other appropriate device.
3. Set your GPSMAP 60Cx interface setting to the appropriate interface format. Refer to Interface Setup on page 58.

Information About USB Drivers

The USB drivers should have been automatically installed when you installed the MapSource program that came with your GPSMAP 60Cx. When you initially connect the GPSMAP 60Cx to a USB port, your computer might prompt you to locate the destination of the drivers for the device. You only need to install the drivers once. After the drivers are installed, your computer will always detect your GPSMAP 60Cx when it is connected. USB drivers might be updated periodically. You can find updates at www.garmin.com.

What is WAAS/EGNOS?

The Wide Area Augmentation System (WAAS) is an FAA funded service to improve the overall integrity of the GPS signal for users in North America. EGNOS is the European version of WAAS.

The system is made up of satellites and approximately 25 ground reference stations positioned across the United States that monitor GPS satellite data. Two master stations, located on either coast, collect data from the reference stations and create a GPS data correction message.

According to the FAA's Web site, testing of WAAS in September 2002 confirmed an accuracy performance of 1-2 meters horizontal and 2-3 meters vertical throughout the majority of the continental United States and portions of Alaska.

WAAS is just one service provider that adheres to the MOPS (Minimum Operational Performance Standard) for global Satellite Based Augmentation Systems (SBAS). Eventually there will be several services of worldwide geostationary communication satellites that broadcast integrity information and differential correction data as transmitted by ground reference stations.

All SBAS systems use the same receiver frequency; therefore any operational SBAS system should be capable of providing your GPS unit with increased accuracy at any location in the world.

Currently, enabling WAAS on your GPSMAP 60Cx in regions that are not supported by ground stations, may not improve accuracy, even when receiving signals from an SBAS satellite. In fact it can degrade the accuracy to less than that provided by GPS satellites alone. For this reason, when you enable WAAS on your Garmin GPS receiver, the receiver automatically uses the method that achieves the best accuracy. To enable or disable WAAS,see page 56.

For more information, go to http://gps.faa.gov/Programs/WAAS/waas.htm.

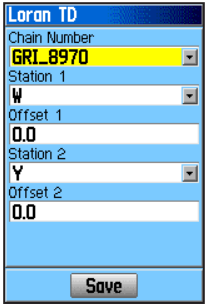
Loran TD Setup

To set up Loran TD from the Setup Menu:

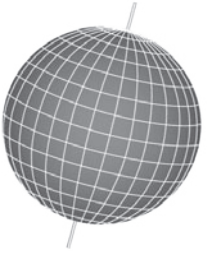
1. Press **MENU** twice to open the Main Menu.
2. Use the **ROCKER** to highlight the Setup icon, and press **ENTER** to open the Setup Menu.
3. Use the **ROCKER** to highlight the Location icon and press **ENTER** to open the Location Setup Page.
4. Highlight the Position Format field and press **ENTER** to open the format list.
5. Highlight Loran TD, and press **ENTER** to open the Loran Setup Page.
6. To change the settings of any of the five fields, highlight the field, press **ENTER** select/enter the setting, then press **ENTER**.
7. When finished, highlight the Save button, and press **ENTER**

If the active GRI Chain, secondary stations, or offsets have been changed since the waypoint was created, the waypoint will now reference the active GRI-chain and secondary stations and adjust the TD coordinates accordingly. Remember that the GPSMAP 60Cx is not relying on the LORAN signal for navigation and actually converts the TD coordinate to a useful latitude and longitude coordinate before storing the waypoint to memory or using it for navigation. Because of this, the unit can navigate to a TD coordinate anywhere in the world.

You must know your GRI chain number and secondary stations to create a LORAN TD position. For more information, read our LORAN TD Position Format Handbook, available on the Garmin Web site, at www.garmin.com/support/userManual.jsp.



Map Datums and Location Formats



Map Datums are based on a mathematical model of the Earth.

What are Map Datums?

A datum is a mathematical model of the Earth that approximates the shape of the Earth, and enables calculations to be carried out in a consistent and accurate manner. The datum is physically represented by a framework of ground monuments whose positions have been accurately measured and calculated on this reference surface. Lines of latitude and longitude on a map or chart are referenced to a specific map datum. Every chart has a map datum reference and the GPSMAP 60Cx can be set to match most of those commonly used.

If you are navigating and comparing the GPS coordinates to a map, chart, or other reference, set the map datum in the GPS unit to the same datum as the map to insure the most accurate navigation.

What is a Location Format?

Your current location can be viewed on the GPS in the form of coordinates. Since different maps and charts use different location formats, Garmin GPS units allow you to choose the correct coordinate system for the type of map you are using. The most common format is latitude and longitude, which is used by all Garmin units.

You can choose to change the location format to use with other coordinate systems. UTM/UPS (Universal Transverse Mercator/Universal Polar Stereographic) are easy-to-use metric grids that are found on most USGS topographic quadrangle maps. You can also select one of several other grids, including a user-definable grid (for the advanced user).

FCC Compliance

The GPSMAP 60Cx complies with Part 15 of the FCC interference limits for Class B digital devices FOR HOME OR OFFICE USE. These limits are designed to provide more reasonable protection against harmful interference in a residential installation, and are more stringent than “outdoor” requirements.

Operation of this device is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment generates, uses, and can radiate radio frequency energy and may cause harmful interference to radio communications if not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The GPSMAP 60Cx does not contain any user-serviceable parts. Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and void your warranty and your authority to operate this device under Part 15 regulations.

Limited Warranty

This Garmin product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Garmin will at its sole option repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration or repairs.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you.

Garmin retains the exclusive right to repair or replace the unit or software or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

To obtain warranty service, contact your local Garmin authorized dealer or call Garmin Product Support for shipping instructions and an RMA tracking number. The unit should be securely packed with the tracking number clearly written on the outside of the package. The unit should then be sent, freight charges prepaid, to any Garmin warranty service station. A copy of the original sales receipt is required as the proof of purchase for warranty repairs.

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Online Auction Purchases: Products sold through online auctions are not eligible for rebates or other special offers from Garmin. Online auction confirmations are not accepted for warranty verification. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required. Garmin will not replace missing components from any package purchased through an online auction.

International Purchases: A separate warranty is provided by international distributors for units purchased outside the United States. This warranty is provided by the local in-country distributor and this distributor provides local service for your unit. Distributor warranties are only valid in the area of intended distribution. Units purchased in the United States or Canada must be returned to the Garmin service center in the United Kingdom, the United States, Canada, or Taiwan for service.

The Garmin GPSMAP 60Cx has no user-serviceable parts. Should you ever encounter a problem with your unit, please take it to an authorized Garmin dealer for repairs.

The GPSMAP 60Cx is fastened shut with screws. Any attempt to open the case to change or modify the unit in any way will void your warranty and may result in permanent damage to the equipment.

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For the latest free software updates (excluding map data) throughout the life of your Garmin products, visit the Garmin Web site at www.garmin.com.

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